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December, 1933

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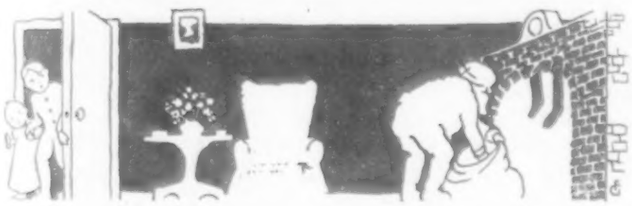

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CONTRIBUTORS TO THIS ISSUE

● DR. JULIAN W. BRANDEIS, internist, sounds the warning that unpleasant breath is a symptom of disease. . . . MARGARET MCEACHERN, who gives admonitions and antidotes in "Holiday Follies," is affiliated with the publicity department of the Minnesota Public Health Association. . . . GEORGE RANDALL MCCORMACK, who utters the timely plea, "Let's Make Winter Sports Safer," is well known to HYGEIA readers.

● DR. CHARLES LERNER, dermatologist, describes beauty culture among the Romans, showing clearly that "there's nothing new under the sun." . . . Hints for harried housewives compose the article, "Holiday Roasting and Broiling," written by SUSAN BEACH, nutrition expert. . . . ALFRED E. PARKER, director of physical education, Berkeley (Calif.) High School, outlines the steps necessary in training for basketball.

● DR. J. ROBERT BURKE, who tells what to do for the cross-eyed child, specializes in disorders of the eye, ear, nose and throat. . . . The control of obesity is discussed by ELIZABETH M. KOCH, instructor in physiological chemistry, University of Chicago, in her article, "Waist-Lines and Life-Lines." . . . The three-hundredth anniversary of the birth of Samuel Pepys is fittingly commemorated in "Medical Notes from the Diary of Samuel Pepys," an article by LOIS STICE, news editor, American Medical Association.

● DR. THURMAN B. RICE, professor of bacteriology and public health, Indiana University School of Medicine, gives the essential factors in the sex education of the adolescent. . . . ELIZABETH CRISWELL, who describes "School Health Work on the Labrador," is in charge of Lockwood School, Cartwright, Labrador. . . . "Helping the Baby to Learn" is made a much simpler task by KATHERINE BROWNELL OETTINGER, mental hygiene supervisor, Scranton Visiting Nurse Association.

● "A Century of Progress in Medicine," as exhibited by the American Medical Association at A Century of Progress Exposition, is the field covered by DR. THOMAS G. HULL, Director, Committee on Scientific Exhibit, American Medical Association. . . . DORIS W. MCCRAY, food consultant, continues her explanation of the work of the Committee on Foods.

● DR. ARTHUR KRIDA, who explains the after-care of infantile paralysis, is professor of orthopedic surgery, University and Bellevue Medical College. . . . ILSE L. CALLMAN describes St. Vincent's orphanage, Chicago.

● DR. OSCAR REISS, associate professor of pediatrics, University of Southern California Medical School, and DOROTHY WALTER BARUCH, instructor in education, Whittier College, continue their series, "I Want to Know," this month explaining "What Happens When Your Heart Beats." . . . The 7B and 7A music classes of Lincoln Junior High School, Wyandotte, Mich., contribute an original musical play.

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DECEMBER, 1933

Amebic Dysentery

IMPROVEMENTS in transportation and the gradual change in civilization whereby vast numbers of persons are constantly in motion throughout the world have added greatly, no doubt, to the interest of living; but they have at the same time introduced new hazards of disease in many places. Once upon a time amebic dysentery was considered to be a tropical disease and of little concern to the people of the United States. Today there is hardly any community that has not had its cases of this disorder. From time to time epidemics occur, rather localized in character, which give great concern to public health workers. The most recent epidemic has been the result of the infection of a considerable number of persons who attended the World's Fair and who stopped in a hotel—the Congress—in which some of the food handlers were infected with amebic dysentery and thereby transmitted their infections to some of the guests.

Perhaps the story really begins with a minor epidemic of amebic dysentery that occurred in another Chicago hotel in 1927. At that time an investigation revealed the fact that one of the cooks was infected with this disorder. As a result of his infection eight other persons in the hotel became infected through eating food contaminated by him. Other cases were promptly detected, and the spread of the infection was checked immediately.

On an average, two cases of amebic dysentery are reported each month in the city of Chicago. About the middle of August, 1933, additional cases began to appear, so that at the end of August, thirteen cases had been reported. All of them were traced definitely to the one hotel. Examinations were made of all the food handlers in this hotel, and by Oct. 1, 1933, it was found that 92 out of 412 food handlers who were examined were infected with amebic dysentery.

The incubation period of amebic dysentery is anywhere from nine to ninety-five days. That means that from nine to ninety-five days may elapse after the infection of the body by the organism before symptoms of amebic dysentery appear in the person who is infected. It is likely, therefore, that a considerable number of those persons who were in the hotel previous to August and September, when the examinations were made, had been infected and that their symptoms did not appear until after they had left the city of Chicago. At the time of this writing, evidence is already available to indicate that this was the case. Certainly this condition developed in a number of men who attended a convention held in the hotel at the end of June, and it was reported that six died of intestinal diseases, three of them certainly from amebic dysentery.

IN INDIANAPOLIS eight cases were reported (far above the average reports for that city), and of these, one terminated fatally. The eight victims could trace their infection to food eaten at the aforementioned hotel during their visit to Chicago.

Because of the nature of the disease, physicians in their diagnoses sometimes confuse amebic dysentery with other disorders. This error is particularly liable to occur since the disease is not frequently seen by the average practitioner. Among the conditions with which it is most fre-

EDITORIAL

quently confused are various forms of diarrhea, ulcerative colitis, appendicitis and peritonitis.

Amebic dysentery is an intestinal disease brought about by invasion of the body by a protozoal organism, larger than the bacteria, which is known as Endamoeba histolytica. This organism in the human body undermines the upper layers of the large intestine. The symptoms begin with frequent, scanty evacuations, often containing mucus and blood, and with severe abdominal pain and depression. Sometimes the early symptoms relating to the abdomen are so severe that, in the event of an inaccurate diagnosis, surgical operation for appendicitis, peritonitis or other abdominal infection is sometimes performed.

IN THE VERY acute type of the disease the patient is suddenly attacked while in the midst of apparent good health. There are severe abdominal cramps and diarrhea. There is often a feeling of serious illness with fever; the abdomen is sensitive. In some cases the symptoms become progressively worse, so that the patient may die in less than a week. In those cases in which there is a likelihood of recovery, a tendency toward improvement begins about four or five days after the onset of the illness. However, even in these cases the dysentery may last for many weeks. In other cases the condition tends to persist over a longer period, and there are mild types of the disease in which the onset is gradual and the condition itself is not even sufficiently serious to force the patient to bed. In this type of case particularly the true nature of the disease may be overlooked, yet this type of patient becomes a carrier of the germs and is thus able to infect others.

If the disease has persisted for some time, there may be secondary involvement of the liver or of other organs in the body. This usually takes the form of an abscess.

IN THE TREATMENT of the disease a drug called emetine, which is the active principle of ipecac, has been found to be most efficient. It is usually given by hypodermic injection.

With modern methods of treatment, if patients are treated early they are likely to recover. Death rarely follows the first acute attack of this disease, but repeated attacks can so weaken the patient that death or chronic invalidism may result.

In the prevention of amebic dysentery, everything that can possibly be done must be done to protect human beings against infection by food handlers. This includes the proper disposal of sewage, the protection of water and milk supplies, protection of food from flies, and adequate cooking of all food likely to be handled by the bare hands of kitchen workers. However, the chief method of prevention is detection and proper treatment of those who carry the disease and the elimination of such carriers from positions as food handlers.

The chances of recovery in this disease depend, of course, on the extent to which it invades the body. In some epidemics there has been a great deal of mortality, whereas in others the mortality is small. The latter has been particularly true in recent years, since more efficient methods of treatment have been developed. There is no way in which any one may protect himself against amebic dysentery, except to live wholly on cooked food which he prepares himself. Public health officials should guard the public against this condition by eliminating as food handlers any one found to be a carrier of this disease.

Holiday Follies

Do You Usually Overdo Your Christmas Celebrations?

Do the Holidays Leave Havoc or Happiness in Your Home?

By MARGARET McEACHERN

"'TWAS the night *after* Christmas and all through the house, not a creature was sleeping, not even a mouse!" Young Mrs. Brown muttered the words savagely.

Mr. Brown glared at her. "I can hear those pests still gorging themselves on that cake you left on the shelf. I should think *they'd* be able to get some sleep!"

It was early morning of the day after Christmas. The Browns were quite young and quite average parents. They had celebrated what they considered an average Christmas. Now they sat limply on the edge of the living-room sofa and surveyed the wild scene about them. Rugs were rumpled. Cushions were strewn about. There were candy marks and water-glass rings on the piano top. Toy trains had crashed into new drums. A doll had been dissected in an endeavor to discover what made it say "mama."

The Browns closed their eyes wearily. But they opened them again quickly. From the room of 12 year old Johnny came moans. Indigestion from too much plum-pudding! From Sarah's room came sharp, excited little cries. Too much excitement for an 8 year old! She was dreaming about the wonderful doll buggy Santa had brought her.

Mr. Brown groaned. He was feeling none too chipper himself. He had had too many of those rich cigars the boss had sent. And he had outdone himself experimenting with the cocktail shaker Ed Andrews had given him.

Pretty Mrs. Brown, a bundle of ragged nerves, was on the verge of physical exhaustion. The relatives had all stayed too late last night. And just a paltry little linen guest towel from Aunt Mary, when she had given her that expensive necklace! Then there were those six cards for friends she had forgotten in the rush. How could she explain to them? Should she say that they were mailed a week ago and must have been lost? Or should she say that she had given them to Mr. Brown to mail and he had forgotten them in his pocket? Oh, dear!

"Well?" queried Mr. Brown, his voice like the cry of a lost soul.

Mrs. Brown tried to pull herself together. "Christmas comes but . . ." she began with an attempt at cheerfulness.

"Thank the powers that be for *that!*" her spouse interrupted. "Well, guess the only thing to do is go back to bed again and try to get some sleep."

The Brown household was attempting to settle down after the nervous excitement that usually surrounds Christmas. When the family doctor called the next day to try to bring the children back to normal living, he lectured the Browns into promising a "new deal" for themselves and their children next year.

The holiday season is naturally a busy, exciting one. There are toylands to visit. There are thrilling bargains in the stores. There are gift lists to be made out, and there is baking to be done, and the tree to be trimmed. Parties, teas and receptions crowd the days.

The holiday season is also a dangerous one. Hectic excitement, overeating and irregular hours can lower the resistance of the strongest adult. Children are bound to suffer the most.

Overdoing Christmas celebration often means that the true significance of the day is forgotten, and when the day is finally ended, all that is left is a collection of somewhat inappropriate gifts and a feeling that all is *not* right with the world.

The wise parent knows how Christmas hysteria can affect the health of the child. Prolonged strain and overstimulation affect the

nervous system. Children who have minor speech defects have been found to suffer particularly. Stuttering becomes worse. Insomnia, nightmares and tensions of many kinds are common. Tantrums and nervous breakdowns result even in the healthiest of children.

Dietary troubles are perhaps the most common during the holiday season. Overindulgence in candy and cakes will ruin the best of digestions. Plum puddings, mince pies and highly seasoned meats and dressings are not intended for small stomachs.

Many children find their regular sleep and rest periods broken at this time. Their parents, busy with their own entertaining, forget that young nerves need rest. If the child goes to bed a little later in the evening, he should make up for it by an extra afternoon nap. If this is hard to manage, the only thing for the mother to do is to plead exhaustion and lie down. The child, seeing the example set, will soon gladly follow. He is sure then that he is not going to miss anything.

Loss of weight during the holiday season is common. Any school teacher will agree that it takes some time to bring the children back to normal ability to concentrate and study after those feverish days.

It is the child under 8 years of age who needs to be watched most closely. Of course, he will want to experience the thrill of taking part in the Christmas celebration. But his mother can guide him safely through it if she will take the time to plan a little program for him.

Some families make it a practice to have a story hour for a week before Christmas. Each evening they gather in front of the fireplace. Either the mother or the father tells a story. Perhaps the story is about the way Christmas is celebrated in various foreign countries. Maybe it is a story that will tell the child that Christmas is the time to think of others, to remember those less fortunate than himself.

If the child is taken to the department stores "to see Santa Claus," only one or two trips should be made. The child should not be taken along on shopping expeditions. If Mother comes home almost hysterical after battling bargain hunters, how is the child to fare?

Christmas eve should be spent quietly at home. Children, when old enough, should help to decorate the tree; later, they should help in putting the decorations away for next year. In this way, they feel that they are truly a part of this great occasion. It is hard for any child to go to sleep on Christmas eve, but the soothing voice of Mother reading a Christmas tale does wonders in inducing sleep.

The number of presents for the child should be limited. Six is a good number. If there are more, they should be saved and given him at intervals during the winter.

Toys should not be chosen haphazardly for Christmas presents. Play is the most important part of a child's voluntary activity. He needs toys that will both teach and entertain him. Toys are his tools. With them he can reconstruct the world about him. Toys that amuse for only a short time are simply time wasters. The mechanical toy that does all the work and requires only the turning of a screw may be amusing for a time, but the child will soon discard it.

The child likes to create. He likes to use his fertile imagination in putting things together. Toys that give opportunity for creative work are best. Clay, sand-boxes, colored beads for stringing, blackboards and simple construction sets are all excellent.

It is better to give a few simple, well made toys than an abundance of cheap, breakable ones. The child must be taught to cherish and care for his playthings.

Toys for young children should be washable. They should not have sharp corners.

Books are important to the child, but they must be chosen carefully. The child may be encouraged to start a little library of his own, similar in plan to that of his parents.

A Box of Toys for Children of Various Ages

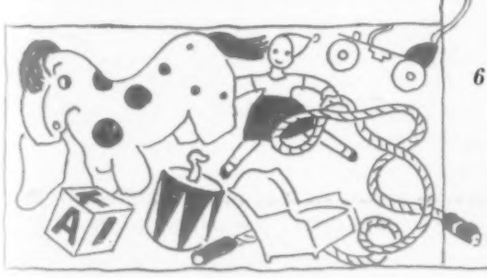
Young Baby
- Bright balls
- Bells
- Rattles
- Stuffed animals
- Small unbreakable dolls

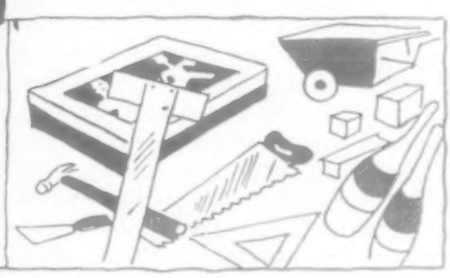
Creeping Baby
- Balls
- Large blocks
- Floor toys
- Play car

From 1 to 2 Years
- Toys to pull by strings
- Small wagons or wheelbarrows
- Doll carriages
- Stuffed animals
- Small dolls
- Chairs

From 4 to 6 Years
- Swings
- Rings
- Gymnasium apparatus
- Sleds
- Wagons
- Jumping ropes
- Skates
- Tool chests
- Cooking utensils

6 Years and Older
- Cooking and sewing materials
- Gymnasium equipment
- Carpenter and art tools
- Building sets
- Electric trains
- Block printing sets





LET'S MAKE WINTER SPORTS

WITH the arrival of the season for winter sports, hundreds of enthusiastic skaters and coasters are seeking ponds, lakes, rivers and hillsides where they may enjoy these healthful and invigorating sports in the crisp winter air. Winter sports were never more popular, and the number of persons participating in them is increasing yearly by leaps and bounds. According to the available statistics, the number of serious and fatal injuries attributable, directly or indirectly, to these sports is likewise increasing and, moreover, it is out of all proportion to the number of persons engaged.

Skating and coasting are probably the least harmful of all the more strenuous forms of exercise; and when they are engaged in at guarded rinks and slides, they are not only enjoyable but conducive to good health. However, as is the case with swimming, accidents while coasting and skating occur usually at unguarded spots; so alarming has the increase in the number of such accidents become that safety organizations throughout the United States are seeking means to reduce or eliminate the hazards.

It is not my purpose to intimate that these healthful sports when engaged in under proper conditions should be suppressed but to call attention to the dangers involved under improper conditions. Since any plan to reduce to a minimum the accidents resulting from participation in these sports calls for full cooperation of parents and teachers, the following observations gleaned from a number of studies are presented.

Investigation has disclosed the fact that the overwhelming majority of coasting accidents are traffic accidents involving children and that they occur most frequently because of direct violation of municipal ordinances. Practically every municipality has an ordinance prohibiting coasting on streets other than those roped off and guarded by traffic officers; yet there is scarcely a community that does not have its annual tragedy or tragedies attributable to violation of this rule. Statistics show that the majority of coasting accidents come under the following classifications:

1. Coasting across an intersection.—The danger of this procedure is evident. Traffic on a thoroughfare covered with snow or ice is never under complete control, and a coaster crossing the street on a sled is in the direct path of two, and possibly three, lines of traffic.

2. Attaching sleds to automobiles or other vehicles.—Generally this is done without the knowledge of the driver, and the danger may arise from any of the following causes: 1. The driver rounds a curve rapidly, and the sled swings into the opposite traffic lane or overturns, spilling the occupants into the street. 2. The driver stops suddenly and momentarily, and the sled, tending to keep its forward motion, passes under the car, and the coasters are injured when the car starts. 3. The driver is forced to stop suddenly, and the cars following in the line of traffic, being unable to stop quickly enough, crash into the sled. 4. The sled strikes a spot, such as a manhole cover over a sewer, which is free from ice or snow, and the tow cord breaks, leaving the sled in the line of oncoming traffic; or, if the coaster is clinging to the rear axle, he is jerked from the sled. 5. The sled gets into a street-car track and upsets or veers into the opposite traffic lane. 6. The occupants of the sled are overcome by carbon monoxide gas from the exhaust of the motor.

3. Coasting across a body of water.—Many accidents of this nature are reported each year. Recently two boys were drowned in Fall Creek in Indianapolis when their sled plunged through thin ice.

4. Striking an object while the sled is traveling at a high rate of speed.—This type of accident frequently results in serious head injuries, especially when the coaster is prone on the sled. During the past winter two youths in southern Illinois struck a tree with such force while coasting that both were killed instantly.

It is evident to all that the control of coasting on the streets and the prevention of attaching sleds to vehicles can never be accomplished by any police force without full cooperation of parents and teachers. Schools have accomplished much in the organization of traffic patrols, and in some communities they have entirely eliminated accidents to pupils going to and from school. It seems now that there is no better field for continued safety education in the schools than that of attempting to educate against coasting on the streets.

The greatest danger in ice skating, of course, is that of breaking through the ice and drowning or suffering severely from freezing and

SAFER

By GEORGE RANDALL McCORMACK

exposure. Here again it is the unguarded stream or pool that claims the majority of victims.

Ice, as every experienced skater knows, is treacherous. A surface that may sustain the weight of a large number of skaters, properly distributed, sometimes gives way almost without warning when that weight is suddenly and unequally shifted. However, investigations show that the majority of persons who are drowned while skating do not break through the ice but skate or jump into holes already in the ice. Some, of course, skate into holes unwittingly, while others fall into them while trying to execute a jump on skates. Holes in the ice may be there because of natural or unnatural reasons, and it is always best to explore the surface of the ice carefully before attempting to skate rapidly. Frequently, during prolonged cold spells, conservationists cut holes in the ice for the benefit of aquatic life; and in some regions, ice is cut for storage. Again holes in the ice may be caused by a warm spring or by an obstruction in the water, which may give rise to a strong surface current. All these conditions present hazards to the skater; and, since in spite of all methods of prevention yet devised, persons continue to get themselves into the water through holes in the ice, it may be well to give here the proper methods of rescue and treatment in such cases.

The human chain method of ice rescue is the best of all methods when there is a group and no equipment is available. The procedure is simple. One of the group slides out on his abdomen and grasps the wrists of the victim. Another grasps the feet or skates of the first rescuer; this procedure is continued until a chain is formed and those on solid ice may pull the others to safety.

In the majority of cases, when the victim is not overcome by fear or numbed by cold, self rescue is possible without equipment. In such cases the person should not attempt to climb straight up over the edge of the ice but should first allow the body to be buoyed up to the greatest extent possible by the water. Then the body should be extended as far as possible over the edge of the ice with the arms spread to distribute the pressure on the ice. Emergence from the water should be in the nature of a rolling flounce, the victim rolling or sliding to a considerable distance from the edge of the break before attempting to stand.

If the unfortunate person is unable to rescue himself, a companion may greatly aid him to climb out by pushing a plank, bench, ladder, or even a branch from a tree out to him. In such cases the longer the object is, the better.

Standard equipment for ice rescue consists of knotted ropes, or ropes with a ring buoy attached. These are simply slid out over the ice to the victim, who grabs hold and is pulled out. When the person is unable to hold on to a rope, an apparatus consisting of two ladder-like structures about 30 feet long, set at right angles to each other and mounted on sled runners, is most frequently used. The rescuer pushes the apparatus over the hole in the ice, climbs out on it and grasps the victim. Ropes attached to the apparatus make it possible for others to pull it in safely.

Frequently a person is pulled from the icy water and dies from drowning or as a result of illness contracted through exposure. When a person has been removed from icy water, a physician should be called immediately; until he arrives, first aid methods should be used. If possible, the victim should be taken at once to a moderately warm room, and his clothing should be removed. If it appears that he is suffering from prolonged immersion rather than from freezing, artificial respiration should be started at once and continued until a physician orders it stopped. If the victim is breathing freely and parts of his body show signs of having been frozen, he should be placed in a room where the temperature is slightly above freezing, and he should be covered with blankets until the arrival of a physician. In no event should the frozen parts be massaged with ice or snow unless a physician so directs.

UNPLEASANT BREATH

A Symptom of Disease

By

JULIAN W. BRANDEIS

"WE ARE entirely too considerate of the feelings of our associates," Dr. William Osler once remarked, "in regard to criticising the condition of their breath." This truism invites expatiation. When the breath is tainted, tacit evidence is offered that something is out of order along the canal that leads from the mouth to the stomach and to the lungs. Therefore a laden breath is a symptom of illness just as surely as is fever or headache; as such it merits investigation to determine its significance. If vanity resents its revelation, a cure is denied. That is certainly false pride.

The gums, which constitute the first structure encountered beyond the lips, are of prime importance in the frequency with which disorders are reflected in the breath. Pyorrhea alveolarus, or pus about the teeth sockets, assumes perhaps a stellar rôle in the matter of disagreeable breath. A large number of persons who are unaware of the fact are affected; this becomes apparent when, on squeezing the gum at its junction with the teeth, pus is exuded. The dentist is competent to clear up the infected areas and to prescribe care which will prevent extension.

Stomatitis, which refers to any milder inflammation of the gums or, indeed, of any part of the oral cavity, produces a similar evidence on the breath. The term should not be misunderstood, for stomatitis has no more to do with the stomach than the term gastritis has to do with gases.

In ulcerative stomatitis the gums become swollen, soft and spongy; and if an energetic attack on the causes is not constituted, the condition may even terminate in loss of teeth. This condition usually affects undernourished children who dwell in unhygienic surroundings, and it is abetted by neglect of the teeth. A cure is readily effected by attention to the constitutional state, together with a proper hygiene of the mouth.

Other grades of stomatitis of lesser severity, all the way down to the ordinary canker sore, are capable of lading the breath with a disagreeable odor. They are largely amenable to treatment by mouth washes, a purge and care of the general health. Children just past the age of dentition are extremely susceptible to these ailments; and if the condition is not cared for, the mouth rapidly becomes foul and the general health suffers, both from the infection and the inability to take food. It is important for the mother to know that such an involvement of the mouth with spongy, bleeding gums, appearing in infants, may be a symptom of that dangerous but curable disease, scurvy. This requires improved hygienic conditions, including fresh air, tonics and, as an indispensable requisite, the use of fresh milk, beef juice, fruit and tomato juice administered under a physician's direction.

Poisoning by a number of drugs is often revealed in swelling of the gums, accompanied by fetid breath. For example, the phosphorous poisoning of workers on matches, the lead poisoning of painters and plumbers, and mercury poisoning are frequently first suspected on such evidence.

Any one who has the opportunity to view the fine collection of microbes that a skilful bacteriologist can isolate from a carious tooth will never again doubt that a bad tooth may declare its presence in every breath which its host exhales. Then when it is learned that almost every variety of wicked germ extant may find lodgment in such a cavity, sufficient reason is offered to make it imperative that the oral house is kept in order.

Proceeding downward toward the throat, a spot is reached which is second only to pyorrhea in affecting the breath. The tonsils are the offenders. These glands have their surface broken by depressions, or crypts, which, like their Egyptian counterparts, harbor dead tissue; at this point the simile ends because no

protection from decay is offered here through skilful embalming. The plugs of detritus are usually composed of epithelial cells, food and pus cells. The physician may remove these masses from the tonsil, but usually such tonsils are unwelcome guests which are "better out than in."

Various ailments of the stomach may laden the breath with an odor which ranges from simple heaviness to a most disagreeable taint. The fermentative activities within the stomach in these diseases give rise to the formation of gas and to the production of such abnormal acids as lactic and butyric; the tongue becomes coated and the mouth dry, and every exhalation testifies to the abnormal condition within the body. Sometimes a simple purge and temporary abstinence from food, followed by care in the diet, suffice to purify the breath; but in refractory cases, a physician is the only one competent to outline the treatment.

The habitual drinker sets up a chronic gastritis which is consistent in imparting an odor of stale beer to the breath. The heavy smoker bears a halituous hall-mark which clings to him like the proverbial poor relation; but it is also true that others than smokers may make their proximity redolent by indulgence in onions, shallots, leeks and certain cheeses. Then may the smoker gleefully sing, "You ask me why her breath is not sweet?"

Various poisons either ingested or formed in the body through constitutional disease may impart to the breath a distinctive odor. Hydrocyanic acid suggests bitter almonds; phosphorus, less elegant, recalls garlic; arsenic imparts an aroma of onions; some persons recognize ether and chloroform, and almost every one can recognize the odor of alcohol. Regarding organic diseases, the patient with a severe case of nephritis may exhale an ammoniacal odor, and advanced diabetes is revealed to the initiate by a fragrance likened to the smell of overripe apples on the breath.

The nasal cavity, an offshoot of the throat, harbors disturbances which may offend the breath. It has been stated that any material that is dammed up and decaying in a cavity is apt to make its presence evident to the nostrils. The interior of the nose is of such conformation that it lends itself readily to the retention of its secretions. In nasal catarrh there occurs a noticeable swelling of the scroll-like structures, called turbinate bodies, which are the principal feature of the internal architecture of the nasal cavity. Thus a blocking-up of the secretions follows with an associated heavy breath. In some instances, during rhinitis, it is possible to clear the passages by means of a mild alkaline spray or douche; in others, such treatment is inadvisable because the force required to free the clogged canals may endanger the internal ear by spreading infection along the eustachian tube.

Children who have the back of the nose occluded by a growth of adenoids exhibit from time to time a taint of the breath which is similarly due to a retention of the secretions by the obstructing mass, with a subsequent invasion of bacteria. Cleansing of the nose is but a subterfuge in this condition, and operation is indicated to remove the adenoids.

The nose presents also several accessory recesses, or sinuses, which at times become inflamed; if putrefaction of the retained discharge ensues, an unpleasant odor may be transferred to the breath. The specialist must cope with this situation.

Ozena is a destructive process within the nostrils which produces a most disagreeable odor. Antiseptic nasal douches are usually unavailing, and the problem of relief must be placed in the hands of the specialist.

Even within the lung a collection of pus may form, causing a fetid breath. This can be overcome only by medical or surgical cure of the abscess. Finally, that rare disease, gangrene of the lungs, produces a nauseating odor.

Holiday

THE holiday season, with the first penetrating winds and thin crusts of ice across small lakes and ponds, brings a keen appetite for meat and fowl. This food is natural to man and is well utilized by the normal person. The composition of meat is more nearly like the composition of the human body than is that of any other food; meat is an excellent building material. One should not subsist entirely on meat but should use it as a main source of protein, valuable chiefly for the nitrogen which it contains. It may be supplemented by eggs, milk, cheese, fish and vegetable proteins. Other foods are economical and efficient sources of carbohydrate, cellulose, vitamins and minerals; when they are oxidized in the human body, they leave an alkaline ash. Meat and cereals leave an ash residue which is acid; thus may be seen one reason why it is natural to combine vegetables, fruits and milk with meat and cereals to make a balanced ration. Besides being splendid sources of protein, meats furnish iron, traces of copper and vitamins B and G.

The actual nourishment obtained from a piece of meat or fowl depends largely on its selection and cooking. Improper procedure may produce a product having nutritional value, flavor and texture approximating that of shoe leather. In the realm of meat cookery it is possible for poor cooks to do more toward ruining good food than in the preparation of any other raw food for human consumption. On the other hand, a really clever housewife selects meats with care and cooks them according to their special requirements, in order to preserve flavor, aroma and tenderness.

While meat is cooked by heat, it is toughened by heat which is too intense or too long continued. There are two types of meat, the tough and the tender. Unfortunately these do not come plainly labeled. It would be hard to decide on a definite dividing point; a steak which the grocer assures a bride is "nice and tender" might be considered only mediocre by her experienced mother. As a general rule, the tender meats are cooked quickly at high temperature for short periods of time. The tough, fibrous meats are cooked slowly for a long time, in the presence of moisture, to make them palatable and to conserve the nourishment. Tender meats are made up of short fibers and are fine grained. Since they are taken from the parts of the animal where the muscles are little used, there is little or no tough connective tissue. The dry heat of roasting and broiling cooks these tender cuts, without added moisture or fat, in their own delicious juices. This is a most healthful method of meat preparation and develops unusually delightful flavors. I shall consider in this article the selection of poultry and meat for roasting and broiling, and the proper methods for producing wholesome food for normal persons.

For the holiday table, a young bird should be selected for it is more tender than an older fowl. Two turkeys, each weighing about 9 pounds, may be roasted side by side in a large roaster in less time than an 18 pound turkey; also they will furnish a greater number of drumsticks, wings, thighs, livers and breasts. In an old turkey hen the scales are more prominent and the wattles more developed than in a young turkey hen. The old turkey gobbler is distinguished from a young one by his spurs and by his longer, more bristly and prominent beard. In bronze turkeys, which are the most common variety, the shanks and toes in the mature bird are pinkish; in the young birds they are almost black. The caruncle, or fleshy growth about the neck, is larger and more developed in an old bird.

Modern aids to housekeeping deserve a vote of thanks as "wife savers."

Roasting and Broiling

By SUSAN BEACH

The goose or gander has a heavy dewlap under the throat, which is more pronounced in a mature specimen. A white or brown Chinese goose has a knob on top of the head which is larger on the older birds. Weight is not always a good guide, since a mature bird may be lighter than a young bird of a different strain. Domestic turkey, duck and goose are welcomed by holiday guests seeking a change from the ever popular chicken. Keeping poultry cold after it has been dressed and refrigerated is extremely important. Maintenance of low temperature is essential to prevent spoilage. The day before the feast, singe the fowl over the fire to burn away fine fuzz and hairs if this has not already been done. Scrub the fowl with a stout brush and rinse it well in running water until the flesh is absolutely clean. Rinse the inside of the bird thoroughly, and with fowl shears or with ordinary scissors trim off any portion which appears dark and bloody. Put the fowl back into the refrigerator until roasting time.

Rub the inside of the fowl lightly with salt, fill with bread stuffing or other dressing which is lightly mixed and moist, but not compact or soggy; do not crowd the dressing in too tightly. A fowl may be roasted without stuffing. After the outside has been rubbed lightly with salt, the fowl should be placed on a greased trivet, wire rack or perforated mat in the bottom of a roasting pan; this rack will hold the fowl up out of its juices for better cooking and browning.

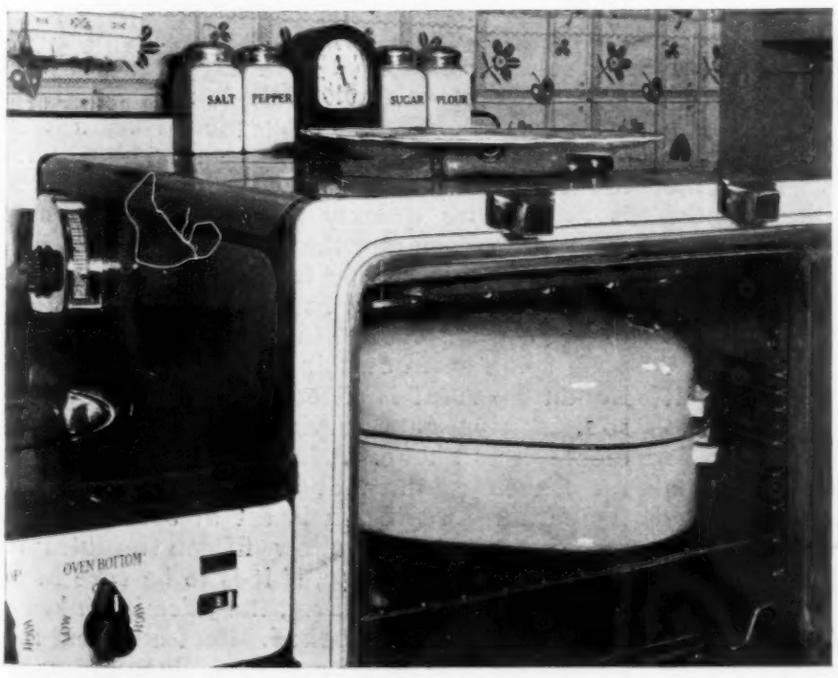
It has been found that salting poultry or meat before cooking makes little difference in shrinkage or loss of meat juices. It assures better flavor throughout; it also saves time and bother.

There is some difference in the dryness of fowl. Turkey is quite dry meat and is improved by pouring a half cupful of melted butter over the breast. Duck requires no added fat but is improved by adding a couple of sliced onions. Goose should have some fat trimmed off before roasting.

The roaster should be weighed before filling and then weighed again with the stuffed fowl in place ready for the oven, in order to get the net weight. Thirty minutes should be allowed for each pound, total roasting time, in an oven heated to 350 F. This is a good general rule which is easy to remember, and it gives good results with all fowl. If the weight is more than 15 pounds, the fowl will not require quite the full time according to this rule; the time can be cut short a half hour.

An unusually old fowl may require a little more time, and if it is dry, half a cupful of water may be added to create steam. Ordinarily, no water is added to the roaster. The meat is cooked in its own juices and basted by its juices which arise as steam, condense inside the cover of the roaster, and drip back on the fowl.

Young chicken is delicious roasted in the manner just outlined. If it is very young, half a cupful of mixed butter and water may be added. An older chicken has sufficient fat on it to roast satisfactorily in a covered roaster, without the addition of butter or water. No matter how small the fowl, one hour may be considered the minimum roasting time at 350 F., since all that is accomplished during the first portion of the roasting time is to heat the meat and the roaster.



Heat regulators and control clocks make for "fool-proof" cookery.

Merely to brown a roast, put it uncovered into an oven preheated to between 450 and 550 F., or place it beneath a broiler flame. Ordinarily a roast will brown satisfactorily during the usual roasting period.

An old rooster has spurs and a large comb. An old hen can be easily distinguished from a young pullet, since the vent is larger after the laying of eggs, and the legs of the older bird are usually more scaly. Allow ample time

A rolled rib roast may be a thing of beauty.

for roasting older chickens, be sure that the roaster is covered, and do not try to speed up the roasting by using an oven any hotter than 350 F., which has been found to produce less shrinkage than higher temperatures.

It may be possible to obtain broilers in late fall, although these are more commonly available in the early summer. Broilers may be purchased already split and cleaned. If you purchase them undrawn, split them down the back with a strong knife or with shears, spread them open and remove all inedible parts. Wipe the birds with a damp cloth or rinse them clean. Brush them with olive oil, cooking oil, melted butter or bacon fat, using a pastry brush. Sprinkle the flesh side with minced parsley, salt, paprika and celery salt; then squeeze over all the juice of half a lemon. Preheat the broiler until the electric coils are cherry red or the gas flame has just warmed the broiler pan. This requires only a few moments for either stove. Arrange the chicken, skin side down, on the greased wire rack of the broiler pan. Put this on an oven rack and slip it into the groove which will bring the chicken close enough to the heat so that it will cook fast yet will not char at the edges. Sear for five minutes. Turn the chicken over and cook the skin side until it is crisp, brown and thoroughly done. Turn the chicken again and complete broiling of the fleshy side. The broiling requires from twenty to thirty minutes, total time. The chicken may be cut into small pieces, country style as for frying, and broiled in the same manner in less time. Other meats are broiled in a similar way. Each side may be sprinkled with salt after it has been seared or after the meat has been completely cooked. In turning meat, care should be taken not to pierce the lean portion and let the juices flow out; the fork should be put into the fat at the edge.

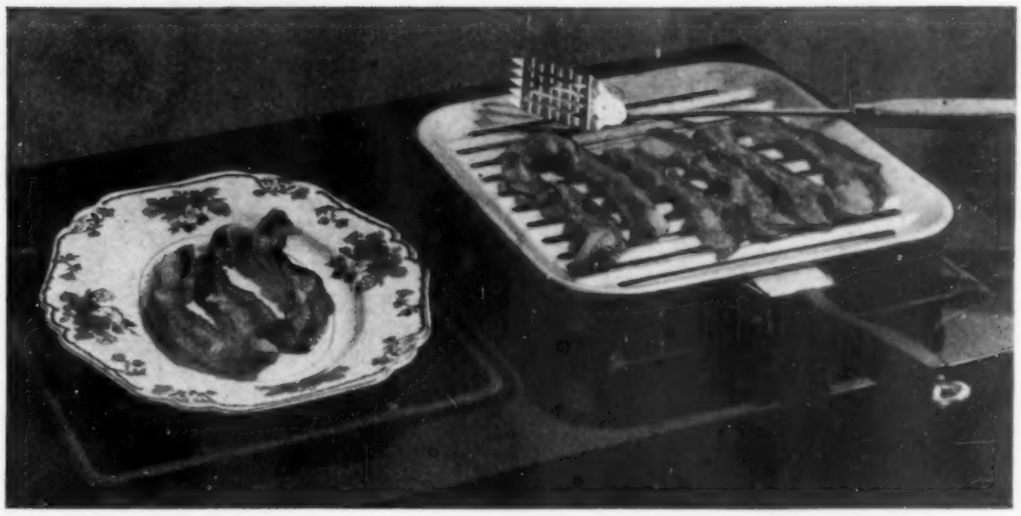
As broiling requires almost constant attention, the heat regulator may be set at "broil" and the door may be left ajar; or the regulator may be set at 350 F., and the meat may start cooking from a cold oven.

A broiler pan is easily cleaned if enough water is added barely to cover it before the broiling is started. The juices drip onto this water and are less liable to catch fire, burn and give off smoke; they are saved for delicious gravy. To make gravy an appetizing brown color, place ordinary flour in a shallow pan in an oven at 350 F. until lightly, evenly browned; it is thereby dextrinized, and made sweeter in flavor and a bit easier to digest. This flour may then be stored for gravy making. Use 3 level tablespoonfuls to each cupful of liquid. When possible, make gravy directly in the broiler pan or roaster, although it is often convenient to pour the juices out into a saucepan.

Planked tenderloin is delicious indeed! Planks of individual size, made of seasoned oak, may be procured. They should be well greased; as soon as the pieces of beef tenderloin, which should be about 3½ inches across and 1 inch thick, are broiled on one side, they are placed on the planks to finish cooking. They should be served immediately, each plank being placed on an individual china service plate. The plank itself may be garnished with hot mashed potato pressed through a large pastry bag, and with sliced carrots, buttered peas or other colorful vegetable.

It is not advisable to leave uncooked meat in the oven for several hours in warm weather; but if the meat is taken directly out of the refrigerator and placed in a heavily insulated oven, with a room temperature at about 70 F., it is quite safe to delay cooking for a couple of hours. If meat is being cooked for only one meal and consumed at once, cooking may be delayed for a longer period. If a large roast has been properly refrigerated, the left-over meat, which is soon cooled to room temperature when it is uncovered, may be used for cold slicing or reheating the following day.

It is not necessary to give any attention whatever to meat or fowl while it roasts, if it has been salted before being placed in a heat-controlled oven. For oven roasting, choose beef tenderloin or a rib roast. A standing rib roast is done more quickly because of the greater exposed surface and the larger amount of bone and suet in proportion to solid meat than when this cut is boned and rolled. Ask your butcher to put a piece of suet in the center of the roll; push some salt down into this before roasting. Rolled rib roast is sliced across the end of the roll, making neat servings of attractive solid meat without bone. A beef roast may be seared for fifteen minutes at 500 F., then the oven temperature regulator is set at 350 F. For a standing rib roast, allow fifteen minutes for each pound, total time, if it is to be rare in the center. Rare beef is firm, the juice is pink, and the meat is slightly cooked. Beef and veal may be cooked rare if the quality is fine, with even, close, firm, tender texture. All other meats and



This top-stove broiler, a time and trouble saver, may be used for bacon, steaks, chops and other meats.

fowl are cooked well done. Because of the danger of trichinosis, a parasitic disease which is often fatal, always cook fresh pork and cured pork until they are well done, allowing thirty minutes for each pound at 350 F. Trichinosis is not to be feared with other meats. For a standing rib roast that is to be medium done, twenty minutes is required for each pound, total time; for a well done roast, allow twenty-five minutes a pound, total time. For rolled rib roast, tenderloin or other solid meat, allow twenty minutes a pound for a rare meat, twenty-five minutes for medium done, and thirty minutes for well done.

Other cuts of beef are not ordinarily suitable for oven roasting, but prime, or No. A1, beef is perfect in quality, thickness of flesh, finish, texture, grain and tenderness; such beef furnishes roasts from the chuck, shoulder and rump which can be oven roasted. Top of the round roast, short ribs for roasting, and sirloin butt roast are also suitable. In lower grades of meat, these should be braised or pot roasted. The best beef is rich bright cherry red in color. There is a good marbling of fat throughout the lean which makes the meat juicy and full flavored; this results from correct fattening of the animal. The fat at the edges of the steak or roast is firm, flaky and white. The bone is brittle and white. Contrast this with old, poor quality beef which is darker red, lacks the marbling of fat throughout the lean meat, has yellow, greasy, soft fat at the edges and darker yellow bones which are much harder for the butcher to saw. The texture of older beef is coarser, the fibers are longer, and there is more tough connective tissue. It is likely to be stringy if boiled; therefore it should be simmered just below the boiling point if you are cooking a shank for soup or a shoulder for stew. The pressure cooker can be used successfully for cooking such meat tender, the total cooking time being less than half of that required in a steamer, dutch oven or pot roaster.

Choice, or No. 1, beef closely resembles prime, or No. A1, in nearly every respect. It is slightly deficient in quality and in finish. It is more plentiful in winter and spring but is available in limited quantities throughout the year. Good, or No. 2, grade includes a larger number of carcasses than the two higher grades; it is above average in quality, and it is the lowest grade that shows any appreciable marbling of fat throughout the lean.

More than 50 per cent of all carcasses marketed annually fall within the next grade, that of medium, or No. 3, representing good average beef.

Common, or No. 4, beef is deficient in quality, shows advanced age, and has tough flesh. This is what is commonly sold at butcher shops featuring low prices. It is the lowest grade offered regularly to retail trade under normal conditions. Cutter, or No. 5, and low cutter, or No. 6, beef are used for dried beef, canned beef and boned meat. Hamburger may be tough and hard to cook if it is made from beef of a low grade; it may, however, be ground from trimmings off steaks and high class roasts. Lightly salted and peppered, made into flat cakes or into one large "steak" an inch and a half thick, it is broiled tender and delicious.

A good steak for broiling is smooth and velvety with no trace of coarseness or stringiness; it is firm rather than flabby under the cutter's knife. A steak which is cut thinner than 1 inch should never be broiled, as it is likely to dry out too much. It may be cut as thick as 2 inches, and if the meat is good quality and tender it can be broiled well done throughout, although many prefer a medium or rare steak for its exceptional flavor. For serving six or more persons, choose a sirloin steak; these are known as butt end, wedge bone, round bone, double bone and pinbone, as they progress from the beginning of the hip joint to the point of the hip bone. The butt end sirloin steak is largest and least tender; the pinbone is smallest and most choice. Porterhouse steaks run smaller than sirloins and are finer in texture; they are cut from the loin end of the short loin, and they include a triangular section of tenderloin. Club steaks are cut from the rib end of a short loin and in some sections are called Delmonico steaks. A round steak cut from best beef is suitable for broiling, but *(Continued on page 1141)*

TRAINING FOR ATHLETICS AND HEALTH

By
ALFRED E. PARKER

The beginning of the chest shot

and

its completion

CHAPTER XII

Training for Basketball

SEVERAL years ago a city high school basketball team journeyed to a country town to play for the sectional championship. The small gymnasium was crowded to overflowing. In fact, several hundred persons who were left on the outside of the small basketball pavilion listened to the results of the game as it was broadcast to them.

Most of the game was a thriller for the spectators, the score shifting back and forth with the country team ahead one second and the city team ahead the next. Then came the last quarter. The score was 17 all. A foul called on a player from the city was turned into a point by the country team, making the score 18 to 17 against the city quintet. And the score was the same when, with a half minute to play, a forward on the city five started dribbling down the court with no one in front of him to prevent his shooting.

Close behind the forward ran a guard. The crowd went mad with its yelling, particularly that section of the spectators who wanted to see the player make the basket. But while he dribbled, the forward could see the guard close on him. As he leaped into the air to place the ball in the basket, practically every one in the crowded gymnasium held his breath. The ball hit against the backboard, rolled around the ring two or three times and fell out. Failure to make that shot lost the game, for the gun went off before either side had a chance to make an additional score.

After the game the forward confessed to his coach, "I'll never forgive myself, Coach, for missing that shot. I should have made it. I've made hundreds of similar, close-in shots, but I couldn't stop my brain from flashing the thought that as soon as I attempted to shoot, that guard would pounce on me and spoil my chances of putting the ball through the ring. That crazy thought made me hurry the shot. It was mental, purely mental, and I'll never forgive myself."

Such an incident is characteristic of basketball. Many a player has played well until confronted with a situation which he turned into a mental hazard he could not conquer. Because these are facts, training for basketball requires that the mental attitude is specially trained as well as the muscles; for the player who frets and stews and worries will never be much of a success at basketball. This game requires a nearly perfect tuning of the mental faculties; when that is accomplished, the mental obstacles which arise in a game can be surmounted.

Most boys who play on a school team have to play before a crowd. And it is the consciousness

of the crowd looking on not far from the court that is often the cause of a wrong mental attitude. Some boys allow their minds to make too much of the crowd; they think entirely too much about the spectators. Probably the only way to conquer this self consciousness is to think only about the game, concentrating all energy, mental and physical, on your specific job on the team. If you do that, your mind will have little time to dwell on the crowd. Remember that the expert player is never conscious of the spectators. His mind is so concentrated on the game he is playing that he forgets all about those who are watching.

Arriving at this right mental attitude will require some effort on your part, and the time to start is before the season begins. In your daily life, strive to acquire a serenity of mind; seek for calmness in whatever tasks you do. Say to yourself that worry is not for you; be determined to be cheerful and happy, and you will be. With such a mental background you can go into a basketball game with its fast action and the intense excitement created by a crowd of rooters and play with smoothness and skill.

Besides working on your mental attitude before the season starts, you will want to develop your wind and build up your muscles. Jogging around the track for half a mile a day

The easiest position for shooting a foul

will help you to build your wind, or a couple of fast games of handball will both build your wind and condition your muscles. Jogging and handball are recommended not because they prepare you for the special muscle activity necessary for basketball but because they help to get the muscles into shape, loosening them up and allowing them to be more supple.

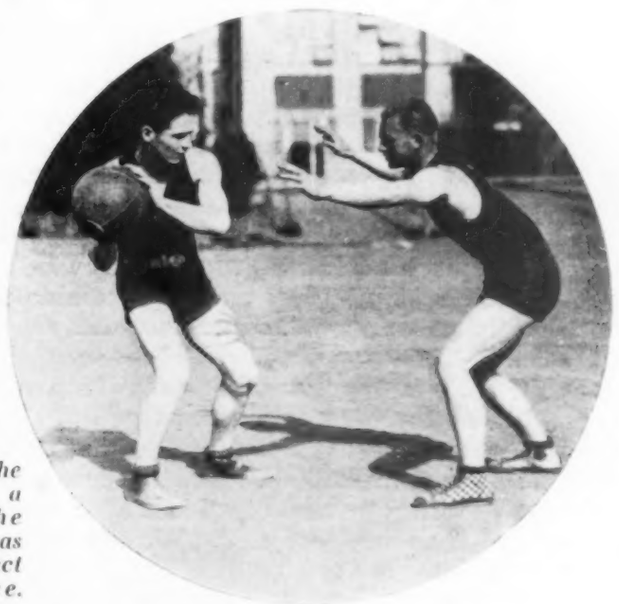
Just before the season opens, every boy should have a physical examination by a doctor. Basketball, as it is played today, is a fast, strenuous game. It demands extra work of the heart because of the rapid exertion in a small space. If the physician tells you that your heart is normal and strong, go ahead and play; but if the physician tells you that your heart is not strong enough for the game, wait until it is. Many a boy regrets having overtaxed the heart by playing basketball when he knew that he should have rested.

Actual development of the muscles used in basketball is not possible by setting-up exercises. The only way to condition the muscles for this game is to practice the fundamentals. Through slow but continual practice at dribbling, turning, pivoting, stopping and shooting, your muscles will round into shape and you will be able to go through a hard game with only a minimum of effort.

As the season advances, work hard on your weak points. If you are a poor passer, put in extra time in tuning your muscles to correct passing; if you are a poor shot, help the muscles by increased practice to adjust themselves to the perfect coordination necessary.

There will come a time, if you are working under a coach who knows what he is doing, when he will ask you to rest for a day or so. Rest is one of the best tonics for a basketball player, yet few boys realize it. A couple of years ago a certain high school team was in the final running for the state championship. The coach, a man of wide experience in teaching the game, saw that his team was a bit stale from having competed in so many contests throughout a long season. So he told the members of his team to rest for a few days.

Not only did this coach ask his team to rest; he went so far as to define what he meant by rest. He told the players to lounge around in



The player with the ball is starting a rear turn. The other player has assumed a correct guarding stance.

the sunshine after school each day, to take it easy, to be lazy. However, one player, the coach's best forward, disregarded the instructions and, seeing a high jump standard on the athletic field, decided that he would try his skill. Out of training for this event, he leaped into the air, and when he landed he turned his ankle. The result was a sprain that kept him out of games for two weeks, and with a weakened combination the championship was lost. To be a basketball player, you must keep faith with your coach.

Having kept this faith, having worked hard to acquire a right mental attitude and having attuned your muscles to the fundamentals of the game, you can go onto a court, crowd or no crowd, and play a fast, expert game. But do not think that such an attainment is easy.

A final tuning of the muscles is quite necessary, and just before a game you should go through all the movements required during the contest. This means that in the few minutes before the game starts you ought to practice pivoting, dribbling, passing, foul shooting and basket shooting and to warm up the muscles just before the starting whistle with fast passes. After such a warming-up period, your human engine will serve you well during the game.

In the preceding chapter you were advised as to the best kind of food for an athlete. What you eat on the day of a basketball game, however, differs somewhat from the food taken in preparation for other sports. Naturally, you should eat lightly on the day of a game, being careful also not to drink too much water and not to eat fatty and highly seasoned foods. On practice days, as well, it is best not to drink water within two hours of exercise.

You should be especially careful about eating just before the game. When you eat three hours before a game, a meal such as the following will be adequate: one small piece of steak, two pieces of toast with butter, celery, rice pudding and a cup of tea. A good meal for two and a half hours before a game follows: two poached eggs, three well browned slices of toast, a dish of peaches and a cup of tea. Two hours before a game, try this menu: soup which is not greasy, two slices of toast with butter, a baked apple and a cup of tea.

A basketball player cannot play his best game with his stomach loaded with food. His wind is hampered, he feels listless and he is unable to keep up the pace. Actual experience will prove this fact.

As the season progresses, your condition will depend to no small extent on the type of clothing you wear. For example, few games punish the feet as does basketball. It is a mistake for a player to wear low basketball shoes, or tennis shoes, as they are also called. Wear a higher shoe that braces the ankle. It is best to wear a cheap white cotton sock. If your team uses the long stocking, you can wear a heavy worsted footless sock as well as the short cotton sock. Socks should be washed often to help prevent infected blood blisters or water blisters. For the same reason, keep all the holes in your socks well mended.

You can avoid tender feet by toughening the skin with a cold water solution of ½ pound of sea salt mixed with ½ pint of vinegar and 1 teaspoonful of alum. Painting the feet with a compound tincture of benzoin or rubbing on a solution of arnica and witch hazel in equal parts are two other good methods of preparing your feet for the hard work of basketball.

If you have weak ankles, you can protect them with a figure-of-eight bandage made of unbleached muslin, 2 inches wide. This type of bandage should extend around the instep as well as around the ankle and should not be too tight. As a part of your equipment, it is wise to wear a padded knee guard, for falls on the hard floor will come, regardless of how well you handle your body.

When injuries occur to you in basketball, take care of them immediately. Probably the most common injury in basketball is a floor burn, the scraping off of the skin that takes place when a player is pushed onto the floor or against the wall of the court. First of all, apply a thin coating of iodine. Compound solution of iodine (Lugol's solution), which is recommended by the American Red Cross Society, is best to use. After painting on the iodine, cover the broken area with a sterile compress. The compress can be held in place with two narrow strips of adhesive placed at either end.

Blisters are a slight injury which, if not cared for, may become infected. Sometimes instead of blistering, the skin becomes callous. Thick callouses can be treated by soaking in hot water, containing washing soda, and by scraping with a blunt knife.

At times, basketball players are bothered with boils. In most instances this happens when the players fail to wash their basketball suits frequently. Wearing dirty clothing next to the skin is liable to lead to boils, although this is not always true.

Basketball players are often subject to "jockstrap itch," an infection of the thighs and scrotum. Jockstraps should be washed often. Talcum powder may give relief. A physician can prescribe suitable methods for controlling infection.

In most instances the boy who conditions himself properly has few injuries. When they do come to the serious-minded player, he takes care of them immediately and is soon back in the game. There is no doubt that it is easy to fall in love with the game of basketball, but enthusiasm must be tempered with judgment, for then you can be the player you want to be.

(To be continued)

Waist-Lines and Life-Lines

An Article on the Control of Obesity

In spite of the amusement afforded by the genial "fat man," overweight is really no laughing matter.

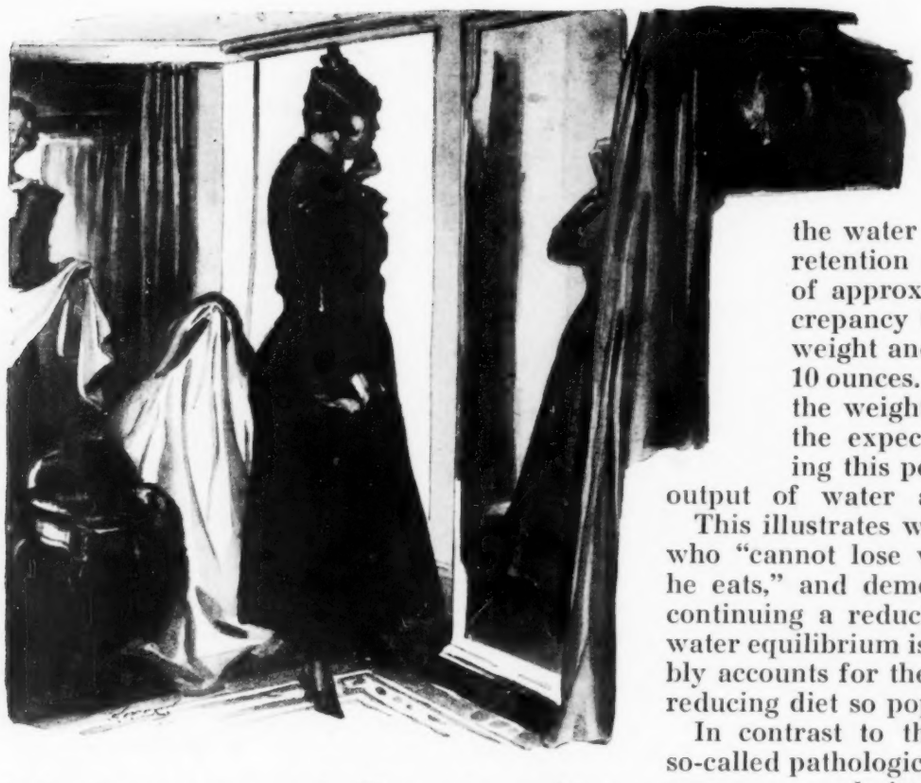
By
ELIZABETH M. KOCH

THE genial "fat man" whose rotund figure and amusing predicaments have been the prolific source of good-natured banter and caricature is taking on a more serious aspect. In fact Dr. Alonzo Taylor considers the increasing incidence of overweight among Americans as a "national disability." That it is a condition which health education can no longer ignore is amply confirmed by insurance statistics. Analysis of such data shows that after the age of 35 overweight is associated with increasingly high death rate, and that at middle life it is a real health menace. Obesity undoubtedly predisposes to infectious diseases, pneumonia in particular, to diabetes and to degenerative changes of the heart and blood vessels. Aside from these inherent dangers, there are esthetic and economic considerations. One may smile at the young woman whose reason for reducing is that she may dress fashionably at less expense. Nevertheless this apparently frivolous desire may be in part the expression of an unconscious sense of vigor and joy in living which accompanies the loss of weight. In other words, her improved health is in part responsible for her improved appearance.

As an outgrowth of attempts to control the weight of patients, physicians and students of nutrition have classified two general types of obesity: (1) the exogenous or alimentary type, referring to those cases of overweight which are the result of excessive food consumption, and (2) the endogenous type, referring to those cases of overweight which appear to be refractory to dietary control. In such persons there seems to be a tendency to store fat so that the patient gains weight "no matter how little he eats." It is usually assumed that these cases are the result of an endocrine disturbance or a breakdown in some normal process of metabolism.

Casual observation, however, will convince any one that most cases of obesity are of the first type and result from a failure to balance appetite against food needs. There is little overweight among primitive people who must compete for a limited supply of food. Overweight does prevail, however, where food is abundant and where a relatively small proportion of the national income must be spent for food. It prevails particularly where social habits encourage frequent and lavish eating. Compare, for example, the body contour and the food habits of the typical Englishman with those of the typical German. Such observations lead one to suspect that so-called fat families inherit food habits rather than obese tendencies.

The simple theory that body weight is affected on one hand by the individual metabolic requirements and on the other by the total intake of energy; that appetite functions to maintain a balance between supply and demand, and that abnormalities of body weight are ordinarily due to the failure of appetite to make a complete adjustment between intake and outgo of energy is supported by the careful experimental studies on hospital patients made by Dr. L. H. Newburgh and his associates of Ann Arbor. The especial contribution made by the studies of the Newburgh group has been the emphasis placed on the determination of water balance and the clearing up of certain confusing results obtained in earlier attempts at weight control. They have shown that in spite of a constant diet there is a variation in the water content of the body from period to period and that this change cannot be attributed alone to changes in activity. They have repeatedly called attention to this lability of the mechanism which regulates the water content of the body, and they look on edema and dehydration as disturbances of this mechanism. Although water comprises from 75 to 90 per cent of the various tissues of the



Her motive in wanting to reduce may be that she yearns for a fashionable figure, but her improved health will be partly responsible for her improved appearance.

body, the processes controlling water exchange are little understood. A fraction of the water becomes an integral part of the cell protoplasm, but a large proportion is undoubtedly loosely bound in the tissues and is involved in temperature control, in the exchange and transportation of nutrient and excretory products and in maintenance of constant pressure and acid-base balance of the body fluids. Most metabolism studies have been for short periods and have ignored or only partially allowed for water intake and output. The Newburgh group, however, have made complete studies of water balance in many human subjects; they have taken into consideration all sources of water including the intake with food and drink, the water formed in the oxidation of food in the body and the preformed water; that is, water previously held by any body tissue which is metabolized during the period of the experiment. Under water outgo they have measured the water in the urine and stool and the insensible water; that is, the loss of water through the skin and lungs. This information together with a knowledge of the food intake and the body weight at the beginning and close of the experiment gives a much more complete analysis of body weight fluctuations than is obtained in the usual metabolism study.

For example, an overweight person suffering from some endocrine disturbance was placed on a reducing diet. During the first fifteen days the caloric intake was sufficiently under the metabolic requirement to cause a theoretical loss in weight of 6 6/10 pounds. Actually the patient lost only 1/3 ounce. Determination of the water balance, however, showed a retention of water during this period of approximately 6 pounds. The discrepancy then between the theoretical weight and the actual weight was only 10 ounces. In the succeeding nine days, the weight fell 8 8/10 pounds instead of the expected 3 6/10 pounds. But during this period there was an excessive output of water amounting to 5 2/10 pounds.

This illustrates well the type of obese person who "cannot lose weight no matter how little he eats," and demonstrates the importance of continuing a reducing diet to the point where water equilibrium is again established. It probably accounts for the success of the eighteen-day reducing diet so popular a few years ago.

In contrast to this case an example of the so-called pathologically lean type is given. This person was admittedly indifferent to food and had always eaten sparingly. But when he was placed on a daily intake of 5,000 calories, he gained 9 7/10 pounds. On the basis of fat and protein stored, his gain should have been only 5 9/10 pounds, but again determination of water balance accounted for the additional weight gain of 3 8/10 pounds.

The accumulation of such data confirms the conclusion of earlier metabolism studies that the law of conservation of energy holds in the living body and that with excessive intake of food there is a gain in weight and with deficient intake there is a loss in weight. Food intake is used here to denote food materials which are actually digested and absorbed and which find their way into the blood and lymph. Certain persons with irritable gastro-intestinal tracts are exceedingly wasteful of food, losing in the feces appreciable amounts of nutrient material which the average person absorbs and utilizes. Food absorbed, rather than food eaten, is the actual food intake.

It must be borne in mind also that metabolic equilibrium can be established at different levels. For example, F. G. Benedict fed a man who had established equilibrium on 3,200 calories a diet of only 1,400 calories. In three weeks he had lost 12 per cent of his weight, and his basal metabolism had dropped 18 per cent. At this level he maintained his weight on a daily intake of 1,950 calories, and his basal metabolism remained low. This appears to be an adaptation to prolong life in the face of famine.

In spite of all the evidence given that overweight is entirely of the exogenous or ali-

mentary type, many physicians still maintain that there is, in some cases, a pathogenesis of obesity. Various theories have been advanced. The most obvious to suggest itself is the condition of hypothyroidism in which basal metabolism is depressed. Dr. M. G. Wohl examined seven patients with hypothyroidism, all with minimum basal metabolism, and found four of them underweight rather than overweight. Another case was observed in a woman in whom toxic goiter and increased basal metabolism developed only after she had made an appreciable gain in weight. Dr. Wohl concludes from these limited observations that although hypothyroidism may frequently be associated with obesity it is not an important cause.

Another theory which has been suggested, but which has not been confirmed by experimental evidence, is that the normal body adjusts its food consumption to the intake; that is, when more food is eaten, more is metabolized. On this assumption, obesity results from the failure of the metabolic mechanism to respond to the stimulus of increased food ingestion. Leanness, on the other hand, follows an overresponse to food.

By still another group a hypothetical fat-metabolizing hormone has been proposed. With a deficiency of this hormone the body cannot burn fat and therefore stores it. Weight reduction under these conditions can be accomplished only by complete elimination of fat from the diet.

None of these theories has been well established by experimental evidence, and although Dr. Newburgh has not wholly explained the abnormal fluctuations in water balance which frequently disturb weight control, he at least has offered a sane basis for dietary treatment of obesity. His observations and conclusions are also supported by Drs. F. A. Evans and J. M. Strang of Pittsburgh. These two workers have proposed the simple principles which must guide one in any attempt at weight reduction.

If body weight is the resultant of food intake and energy output, then to bring about weight reduction there should be the greatest possible difference between food intake and energy needs. Increasing the energy output might be accomplished either by stimulating metabolism with thyroid medication or by an appreciable increase in physical activity. Strang and Evans do not recommend either of these methods as a general practice for the obese person. They contend that basal metabolism should be calculated on the ideal weight for an individual of given height and build on the assumption that the ideal weight represents active metabolizing tissue. They find that, whereas the basal metabolism of obese subjects may fall within the normal range if calculated for the actual weight or even for the surface area, if referred to the ideal weight for that individual, it is frequently from 25 to 30 per cent too high. This tendency to heightened metabolic rate in the overweight person has been reported by other observers. In a person of normal weight such an increase in basal metabolism would be associated with thyrotoxic symptoms. This excessive energy output of the obese person represents the extra work done simply to carry on the functions of living. Under these conditions to stimulate metabolism further by thyroid administration is certainly contraindicated.

To attempt to increase the energy output by active physical exercise seems equally inadvisable. In the first place the additional work of transporting the excess body weight has already placed the vital organs under a condition of chronic strain. Obese persons have neither the inclination nor the capacity to increase their activity greatly. In the second place, the excess energy actually consumed in doing external work such as is involved in systematic exercise or useful labor is relatively low. To require an additional output of from 300 to 500 calories daily above the energy expended in the routine of living entails considerable real manual labor. And such an expenditure of from 300 to 500 calories results in the oxidation of only from 1 to 2 ounces of fat daily. Weight reduction at this slow pace would wear down the enthusiasm and will of the most determined person.

The practicable methods of weight reduction then seem to be limited to decreasing food intake. At first thought complete starvation suggests itself as the simplest means of accomplishing this purpose. But starvation depresses basal metabolism to the point where energy needs are decidedly decreased. For most persons, starvation is an exceedingly uncomfortable proceeding, frequently being associated with nausea and extreme exhaustion.

In planning a restricted diet which is to be followed for some period of time, care must be taken to make it complete in every respect except calories so as to avoid the various phases of dietary deficiency diseases. Failure to give proper consideration to these requirements is the chief criticism of most reducing diets. Quantitatively the most important demand to be satisfied is the protein. Strang and Evans have found that nitrogen equilibrium can be established when 1 Gm. of protein is supplied for every kilogram of the ideal body weight of a given person. This indicates that the active metabolizing tissues remain constant even with appreciable gain in weight. Further confirmation of this was given by the observation that the total daily creatinine excretion was unchanged after many weeks on a reducing diet and definite loss of weight. The actual muscle mass was the same, whether the individual was of normal weight or whether he was overweight.

Some carbohydrate must be provided to aid in the complete oxidation of fat; otherwise ketone

bodies, which are the products of incomplete oxidation of fat, accumulate, and a condition of acidosis arises. The relationship between fats and carbohydrates has been aptly described by the expression, "Fats burn in the flame of the carbohydrates." If no carbohydrate is present in the food or stored as glycogen in the liver and muscles, dextrose is formed from the protein. To spare this protein waste and provide sufficient dextrose in the food for the antiketogenic effect, Strang and Evans have found it practicable to supply 0.6 Gm. of carbohydrate for every gram of protein. Fat intake is only that which cannot be separated from the protein. The menu for such a diet consists of 100 Gm. (about ⅕ pound) of *(Continued on page 1142)*

HEALTHGRAMS ✣ from Articles in This Issue

¶In the United States there is no excuse except ignorance or neglect for a crippled child to fail to secure adequate treatment by orthopedic surgeons; for every state in the Union has set up machinery whereby such treatment is made available to those patients who are unable to pay for private care. *See page 1117*

¶In his diary, under the date of Aug. 31, 1665, Samuel Pepys records that more than 6,000 had died of the bubonic plague that week in London; he adds that the number was probably nearer 10,000, however, for the poor could not all be noticed and the Quakers and others would not have bells tolled for them. *See page 1085*

¶An analysis of statistics compiled by insurance companies shows that after the age of 35 overweight is associated with increasingly high death rate, and that at middle life it is a real health menace. *See page 1081*

¶Whether baby learns poor or useful habits depends on his mother and father, for he learns readily by the hit-or-miss method, if this wonderful chance for correct teaching is not seized. He learns more in his first six years than during any other six years of his life. *See page 1090*

¶It is unfair to any child to deprive him of the correction of a refractive error. . . . In extremely rare instances a "turned" eye has righted itself without treatment, but it is too great a risk to take. *See page 1102*

¶Two turkeys, each weighing about 9 pounds, may be roasted side by side in a large roaster in less time than an 18 pound turkey; also they will furnish a greater number of drumsticks, wings, thighs, livers and breasts. *See page 1074*

¶A laden breath is a symptom of disease just as surely as fever or headache; as such it merits investigation to determine its significance. *See page 1072*

¶Pediatrics is the only department of medicine which is not repair work; it is entirely developmental work. *See page 1113*

¶At Lockwood School in Labrador both boys and girls are given a simple first aid course, and the girls are drilled on the care of the sick in the home. *See page 1088*

¶Cold cream is not as new as one is likely to believe. Galen, the celebrated Roman physician, is credited with its invention nearly eighteen hundred years ago; today, cosmetic chemists use the same formula with but slight modification. *See page 1098*

¶The number of serious and fatal injuries attributable, directly or indirectly, to winter sports is increasing out of all proportion to the number of persons engaged. *See page 1070*

¶You cannot see white blood corpuscles, nor can you root for them in their fight against disease germs; but if you are sick, you can help them to be much stronger fighters by taking extra rest. *See page 1124*

¶Training for basketball requires that the mental attitude is specially trained as well as the muscles. *See page 1078*

¶Toys should not be chosen haphazardly for Christmas presents. Play is the most important part of a child's voluntary activity. He needs toys which will both teach and entertain him. *See page 1068*

¶The fact that gelatin is entirely free from carbohydrate makes it a useful item in the preparation of meals for those persons who require a diet restricted in carbohydrate content. *See page 1092*

¶It is probable that those children who come through the adolescent period slowly and naturally will be better adjusted than those who are hurried through by socially ambitious parents. *See page 1105*

¶During the year 1932 more than 15 million persons received medical care in hospitals in the United States; a patient was received every four seconds, day and night. *See page 1109*

Medical Notes from the Diary of Samuel Pepys

By LOIS STICE

THREE hundred years ago there was born in England a man who became famous for keeping a diary. At the age of 26, Samuel Pepys began to record in shorthand the events and impressions of his daily life and kept the journal faithfully until failing eyesight forced him to stop ten years later. Apparently he did not expect to allow any one to read the diary, and it has been deciphered only through prodigious labors of various scholars. A tercentenary edition now in preparation will, it is said, make available for the first time all the diverting record in seven or eight volumes.

Pepys lived in stirring times, and he has given vivid pictures of that period which has been called the watershed between the modern and the medieval world. He saw the downfall of Cromwell and the restoration of Charles II. He lived through the great fire of London and the great epidemic of bubonic plague that devastated the city and the surrounding towns. He was an official in the British navy during interminable wars with the Dutch.

But Pepys' interest did not end with the epoch-making public events through which he moved. "Any strange thing" set him agog. He had a passion for the theater, music and painting. He was a diligent student and was constantly buying books. His reaction to feminine beauty was the cause of frequent spells of coolness between him and his wife, "poor wretch." He supervised in detail the furnishing of his house, in which he took inordinate pride. Living in a period when men's dress was elaborate, he devoted much attention to his personal adornment and, moreover, he kept an eye on the fine points of his wife's wardrobe.

To this inquiring mind and alert eye and ear, matters of health naturally were of consuming interest, and the diary frequently sheds light on the health conditions of the period.

The frightful visitation of the plague was foreshadowed in the diary by reports that the disease was prevalent in Amsterdam in 1663 and 1664, having been brought from Algiers on Dutch ships. Medical authorities say, however, that the great epidemic was really the culmination of a series of outbreaks during the preceding centuries.

In the spring of 1665, "great fears of the sicknesse" began to circulate in London. On June 7,

"Great fears of the sicknesse" arose, and houses were marked with the legend "Lord have mercy upon us."

Pepys saw in Drury Lane two or three houses marked with a red cross and the legend "Lord have mercy upon us!" From that time on, the town grew more sickly and the population more frightened. By June 21 all the town was in full flight, "the coaches and waggons being all full of people going into the country."

London was a ghastly place that summer. Few persons were in the streets and those few, says Pepys, looked "like people that had taken leave of the world." The bell tolled continually for the dead.

Pepys sent his family to Woolwich, where the plague was less severe, but he remained in London till the end of August. The town grew so unhealthy that he made his will and wrote out instructions for his executors. Afterward he went to Woolwich for several weeks, returning only for urgent business.

The mortality was at its height during late August and September. Pepys records, August 31, that more than 6,000 had died of plague that week, adding, however, that the number was probably nearer 10,000, for the poor could not all be noticed and the Quakers and others

Pepys' most important personal anniversary, that of the day on which he was "cut for stone," was celebrated annually with a feast.

would not have bells tolled for them. The official list for the week preceding September 20 was 7,165.

At first the dead were buried at night to lessen the danger of infection, but later the victims died so fast that the gruesome task could not be finished at night and had to be done by daylight as well. So common did the sight of burials become that Pepys exclaims after seeing a corpse, "But, Lord, to see what custom is, that I am come almost to think nothing of it." In spite of the widespread fear, curious crowds followed the corteges—"because they are forbid," says Pepys—until it was necessary to issue orders to prevent the practice.

In the midst of the horror and pathos of the pestilence, Pepys pauses to wonder whether the plague will cause a change in the fashion of wearing periwigs. No one would dare to buy one, he thinks, for fear the hair had been cut from the heads of persons dead of the plague.

The first indication of a break in the dire situation came in October, when with cool weather the mortality gradually fell. London began to come to life. By the first of January the town was filling and the shops were opening again. By the last of the month the weekly toll had fallen to 56 and the kingdom was recovering from a disaster before which it was absolutely helpless—a calamity from which the United States is protected today only through the everlasting vigilance of its Public Health Service.

Throughout the diary one is reminded of the vast changes wrought by medical science since the seventeenth century. Smallpox, now considered almost a disgrace by the enlightened, was liable to break out in the best of families in Pepys' era—and did. The Duke of Gloucester, the king's own brother, died of it, and so did one of the royal princesses. The Duke of York also had it; of him Pepys remarks, "Blessed be God, he is not at all the worse for the smallpox, but is only a little weak yet." The beautiful Duchess of Richmond fell a prey to smallpox, and Pepys laments, "All do conclude that she will be wholly spoiled, which is the greatest instance of the uncertainty of beauty that could be in this age."

How commonly this disfiguring disease occurred is shown by this passage: "It hardly ever was remembered for such a season for the smallpox as these last two months have been, people being seen all up and down the streets, newly come out after the smallpox."

Moderns enjoy discussing their operations, but surely few of us would go so far as to institute annual celebrations on account of them. Pepys' most important personal anniversary was the observance of the day on which he was "cut for stone." Regularly each year on March 26 he entered a reminder in his diary and piously gave thanks for his good health. What is more, he resolved to keep the date a festival.

Three years afterward he wrote, "This is my great day that three years ago I was cut of the stone and, blessed be God, I do yet find myself free from pain."

The next year, "the fourth solemne day of my cutting for the stone this day four years," he entertained with a large dinner party. The menu for that meal gives an interesting sidelight on the dietary habits of the time: "a brace of stewed carps, six roasted chickens and a jowl of salmon, hot, for the first course; and two neat's tongues and cheese, the second."

Heavy as that seems to the twentieth century American, the dinner for the fifth anniversary was even more astonishing. The record says: "We had a fricasee of rabbits and chickens, a leg of mutton boiled, three carps in a dish, a great dish of a side of lamb, a dish of four lobsters, three tarts, a lamprey pie, a most rare

pie, a dish of anchovies, good wine of several sorts and all things mighty noble and to my great content."

Finally the distress of his eyes and his numerous worries thrust the famous operation into the background, and the year that the diary closes he merely mentions the day, saying he does not remember exactly how many years it has been. It is recorded, however, that he suffered throughout his life from renal colic, and post-mortem examination revealed stones in the left kidney.

Picturesque superstitions sprinkle the pages of Pepys' diary, in spite of the fact that he had an intelligent interest in scientific matters. He solemnly attributes his good health to a hare's foot that he carried, though he "is at a loss to know whether it be my hare's foote or taking every morning a pill of turpentine or my having left off the wearing of a gowne."

It evidently was not the hare's foot that preserved him that time, as his friend Mr. Batten told him only three weeks later that he had made a terrible mistake—the hare's foot should have had "a joynt to it." Pepys did not lose any time rectifying this error; he bought a fresh hare on his way home that night. Yet he was perfectly aware that this was hocus-pocus, for he adds immediately, "it is a strange thing how fancy works, for I no sooner handled the hare's foot but I became very well and so continue." But the next day he is still impressed: "Now mighty well and truly I can but impute it to my fresh hare's foot."

The diarist was apparently susceptible to colds and knew exactly how he acquired them. Posterity is treated to such bits as these:

"Home to bed; having got a strange cold in my head by flinging off my hat at a dinner and sitting with the wind in my neck."

"Home to supper, having a great cold, got on Sunday last by sitting too long with my head bare, for Mercer to comb and wash my eares."

"I have of late taken too much cold by washing my feet and going in a thin silk waistcoat without any other coat over it and open-breasted."

In his view the severity of the infection depended on the extent of the exposure, for once he says, "My cold that I had got was not very great, it being only the leaving of my waistcoat unbuttoned one morning." He had ideas of prevention, too, as he reports, "Myself in good health, but mighty apt to take cold; so that this hot weather I am fain to wear a cloth before my stomach."

The diary was brought to a close by the tragedy of Pepys' eyes. They began to trouble him in 1664, and he found himself less and less able to read and write for long hours, a great trial to such a reader as Pepys. He seems to have gone along in fair comfort until 1668, when they became so bad that he had to have others read to him. He consulted numerous physicians, who prescribed no end of lotions, none of which gave him much relief. Once he was bled, in the hope of a cure.

Physicians have said that an accurate fitting of modern spectacles would probably have restored to Pepys the use of his eyes. The only relief he obtained was through what must have been a bunglesome arrangement of paper tubes, early forerunners of spectacles. They had some kind of glass in them, but they were a long way from the efficient aids to vision now available. He had great hopes of the tubes, but apparently they gave him slight improvement, for only a few weeks later he obtained leave of absence from the navy office and closed his journal forever.

From other records it is known that Pepys did not become blind and that he lived a long and busy life, dying in 1703. He was only 36 when he wrote this pathetic valedictory:

"And thus ends all that I doubt I shall ever be able to do with my own eyes in the keeping of my journal, I being not able to do it any longer, having done so now so long as to undo my eyes almost every time that I take a pen in my hand; and therefore what comes of it I must forbear; and therefore resolve from this time forward to have it kept by my people in longhand and must be contented to set down no more than is fit for them and all the world to know; or if there be anything I must endeavour to keep a margin in my book open, to add here and there a note in shorthand with my own hand.

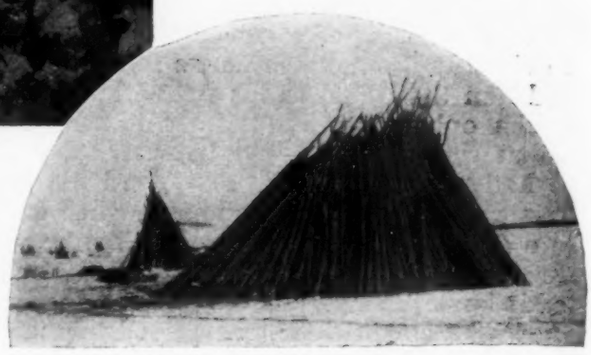
"And so I betake myself to that course, which is almost as much as to see myself go into my grave; for which and all the discomforts of being blind, the good God prepare me!"

Unfortunately, the tubes helped his eyes but little.

School Health Work on the Labrador

By

Elizabeth Criswell



The firs and spruces of Labrador supply fuel for the long winter. To the right are shown stacks of wood ready for use.

THE little motor boat pulled up to the temporary wharf. The man stopped the engine and then hurried forward to hold the nose of the boat out from the wharf; with skill he guided the boat until it rocked gently alongside. Then out from the boat swarmed children, one, two, three, until half a dozen stood on the wharf. It was a beautiful September day, and I had run down to see who our visitors were.

The skipper of the little boat came up to me and, touching his cap, said: "Here they are, Miss. I brought 'em to ye to see that ye can give 'em some learnin'."

Suddenly I realized that the first scholars for Lockwood School had arrived. I was in consternation, for the dormitory building was not nearly finished and the schoolhouse was only boarded up. Where would we put these children? Shyly they looked at me, the woman who was going to care for them during the coming winter. Trustingly little Effie put her hand in mine and said, "I'm hungry, please, Miss." This woke me to action, for the children had to be fed and sheltered.

Within a month after the first boat-load arrived, twenty children were living in the boarding home of Lockwood School. It is true the buildings were still unfinished, but most of the carpenter work was done, and the long winter evenings would give plenty of time for the staff to paint and finish the small jobs. Winter provisions had been stored in the roomy basement; huge stacks of wood near the buildings defied the coming onslaught of the winter. Cosy and warm, we began our routine.

Lockwood School, operated under the direction of Sir Wilfred Grenfell, is a boarding school for the isolated children living in and near Sandwich Bay, Labrador. These children are descendants of early English settlers, who had come out with the Hudson's Bay Company as servants and clerks. Seeing the huge amount of furs brought in by the Eskimos and Indians, those hardy pioneers decided to try hunting. As a man cannot live on the Labrador without a wife to care for his clothing and make his boots, the men married the only available women, the Eskimos. From this union a sturdy folk has grown up. The people have all the virtues and hardihood of an isolated group. There is little crime. Every one is poor, but each family divides with its neighbor if the neighbor is in need.

The hospitality of the frontier had been made evident to me on my arrival in Cartwright when, after traveling all day by dog team, I drew near a little lonely hut set among firs and spruces and almost covered by surrounding snow banks. The fierce greeting of the husky dogs that resented the approach of my team was hushed by the stern command as the head of the house appeared to welcome the stranger. He had not seen me before, but his cheery greeting made me welcome to the best that the house afforded: "You're the Miss that teaches the children, aren't you? Just step in and mother will get you a cup of tea."

The people of Labrador must live isolated lives. Each family needs a plentiful supply of wood for fuel and a large hunting and fishing space to supply the meat needs. When too many families congregate in one place, there is neither enough wood nor enough food. Thus the school and health problems of the children had to be met by means of boarding schools.

There are three boarding schools operated by Dr. Grenfell: Yale School at North West River at the head of Hamilton Inlet, Lockwood School at Cartwright, and St. Mary's River School. Nearly all the children have a chance for some education each winter.

The routine of the school emphasizes health as well as education. Regular sleeping and eating habits are early stressed. In the small homes there is usually no adequate sleeping place. The loft, made by placing rough boards under the pitch of the roof, usually serves as the sleeping place for all the children. Bedtime is at dark, and as daylight continues until late in the summer, the boys and girls come back to school with dark circles under their eyes.

A complete medical examination is given each child when he enters, and as soon as possible all defects are corrected. Weight charts are kept through the school years, and the night-gowned and pajama-clad crowd streaming down to the dispensary the first of each month for the weighing refuses to go to bed until the records have all been entered on the charts.

Our food problem is not as difficult as might be imagined. We use the many varieties of dried fruits and vegetables, with a plentiful supply of potatoes, turnips, carrots, parsnips, onions and beets, which are kept through the winter in the vegetable storehouse. Labrador supplies a quantity of native berries which have splendid preservative qualities. Barrels of these berries are brought into the school in the fall and canned or stored for winter use.

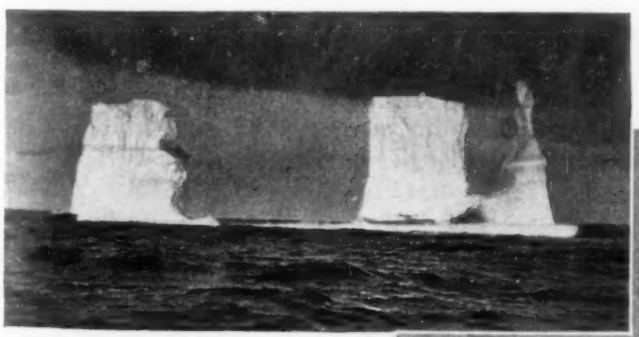
Cod and salmon are used fresh during the summer months and salted and dried for winter use. There are few months of the year in which we are without fresh trout. The brook freezes solid only during the coldest weather. At other times the school boys enjoy fishing through the ice for the next day's dinner.

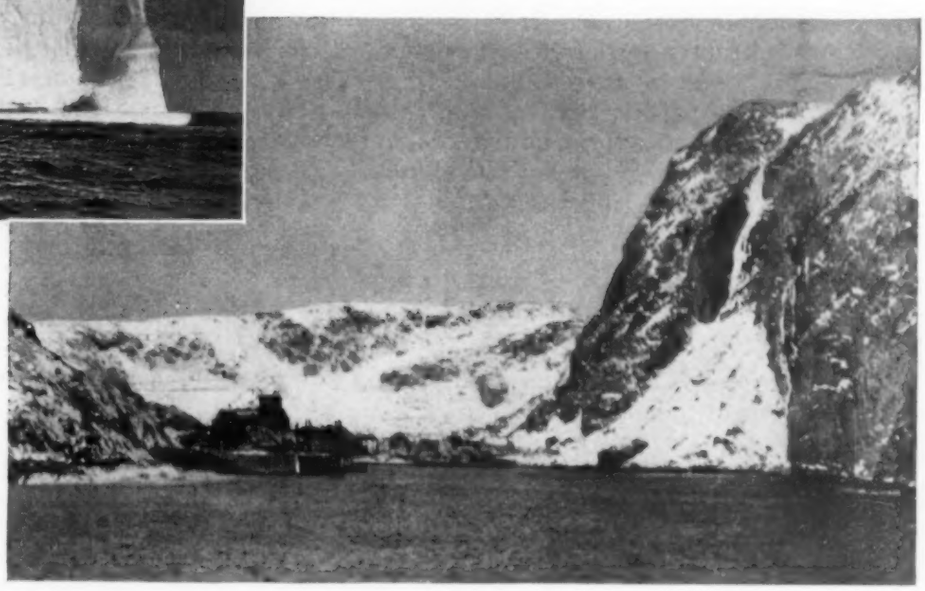
Venison, partridge, rabbits, an occasional seal and often a black bear provide fresh meat. In the spring and fall we feast on wild duck and wild geese.

Cows have been "installed" in two of the Grenfell schools, but at Lockwood School dried and canned milk must supply that need. Gardens have been built around each school, and enough vegetables can be grown to supply the needs for the summer and early fall.

In the schools in Labrador we are not preparing the children to move away. We are trying to help them to live easier and better lives in their native country. The school curriculum work extends to the tenth grade in most of the schools, but few of the children can go beyond the sixth or seventh grade. A Labrador boy usually has to begin to be a bread winner at 14 or 15. Although he cannot go on the long winter hunt with the father, yet he must remain near home to watch the fur path and care for the wood and the dog team while the father and older brothers go far inland.

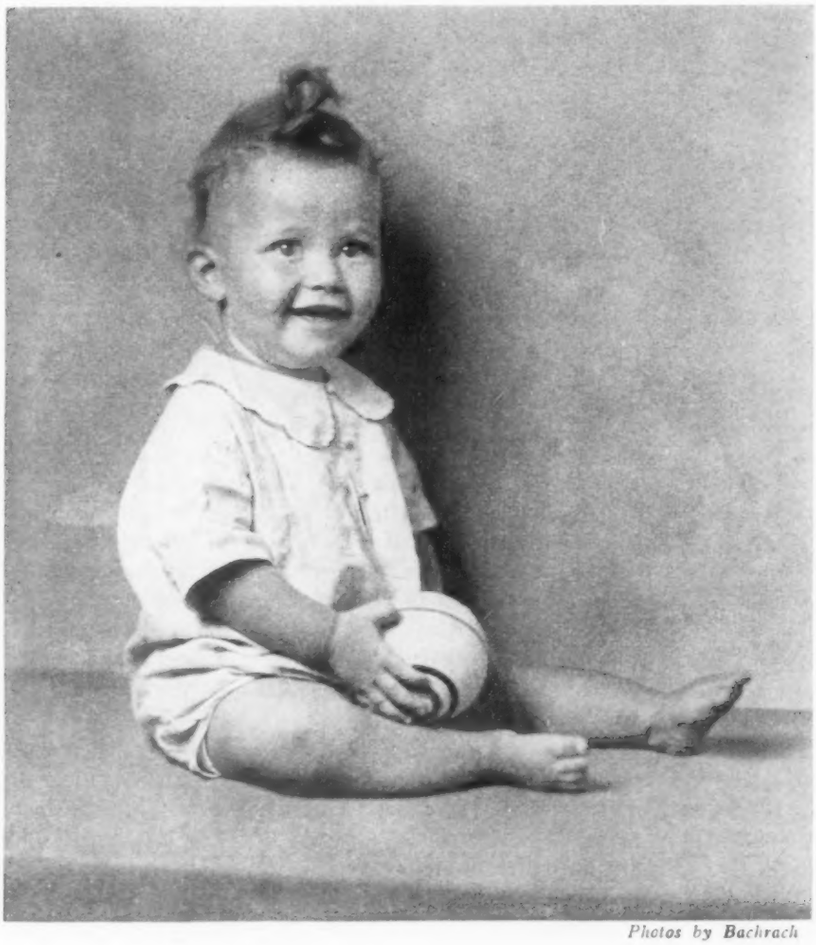
We hope to teach the children how to read for enjoyment and to know enough arithmetic to take care of their accounts. We want the children to acquire regular health habits. Both boys and girls are given a simple first aid course, and the girls are drilled on the care of the sick in the home. But principally we want to teach the children of Labrador to love their own country and to be ready to do their part to develop its vast resources when the opportunity comes.





Above is shown one of Labrador's "summer visitors"; to the right, a Labrador settlement.

BEFORE BABY IS TWO



Photos by Bachrach

Play is just as important a part of baby's life as sleeping or eating.

By

Katherine Brownell Oettinger

II. *Helping the Baby to Learn*

BABY'S learning starts with his first breath. He is learning all the time. Whether he learns poor or useful habits depends on his mother and father, for he learns readily by the hit-or-miss method, if this wonderful chance for correct teaching is not seized. Baby learns more in his first six years than during any other six years of his life.

I. Baby cannot learn properly until mother and father have a clear understanding of good teaching methods.

The baby learns first by doing things over and over again at the same time in the same way. But the second rule is just as important: Baby must feel happiness after he has done the thing you are teaching him. Long before he reasons about it, the baby chooses what he wants to learn. Whenever he does something and enjoys it, he is more likely to do the same thing again.

II. Baby cannot be helped to learn properly unless the same rules are kept all the time.

The baby forgets all the other times he has been left "to cry it out," if one makes the excuse of picking him up "just this one time." He has learned that he is boss sometimes. Wouldn't he be stupid not to try each time to see whether this was the time he could win? Baby must learn that some behavior is useless. How can he learn, if crying sometimes brings what he wants? He will drop that weapon only when he learns it is never worth while.

III. Baby cannot learn properly if mother and father forget that he learns more than one thing at a time.

Sometimes parents are so anxious to break a habit or teach a new one that they do not think about other undesirable feelings which they may be teaching at the same time. If a parent roughly undresses baby and angrily forces back his arms for the doctor's examination, despite frightened cries, he may "show him who is boss," but will the child not also be learning to fear his mother or father, to rage in rebellion, or to hate all doctors?

IV. Baby cannot learn properly if mother or father are sure some habits remain the same, because they did the same thing as babies.

Nothing makes for failure more than a half-hearted attempt at training for such habits as regular sleep, because a parent was always "high-strung" and restless. Refusing to believe that anything can be done about a poor habit because it runs in the family is too often an easy excuse for not taking the trouble to build correct habits.

V. Baby cannot learn properly if mother and father believe in out-growing habits.

Habits work the other way. Each day baby becomes more set in the habits that please him. Too often tricks of a young baby seem cute and smart, but later they are anything but cute and smart. Encourage nothing that must be unlearned. It is always encouraging to remember that baby grows into his desirable habits just as surely as into his poor ones.

VI. Baby cannot learn properly if scolding is used to teach him better ways of acting.

Scolding does not accomplish anything. Baby may even begin to like scoldings if they are the only way he finds of getting attention. During his early weeks the baby will learn the difference between your cross and your pleased voice. Later you may forget that it is not easy for baby to learn such things as feeding himself. Scoldings for spilling only discourage him. Praise helps make up to him for the joy he is losing in having you serve him.

VII. Baby cannot learn properly if he waits for a loud, sharp voice before directions are followed.

Fortunate is the baby who has learned to answer your calm, matter-of-fact voice. It is a helpful trick to drop your voice at the end of a sentence even though you may be angry. It helps you to handle the matter coolly, and baby learns that it is as important to pay attention to your quiet tone at all times as it is to wait for a harsh command.

VIII. Baby cannot learn properly if he is not given freedom and exercise.

Learning through doing is the baby's biggest chance to discover his world! Mental growth in the early years depends a great deal on the way baby learns to use his hands, legs and other muscles. The old-fashioned binding of the baby or tight pinning in crib or carriage is an unfair handicap. A special hour each day should be set aside for playing and exercising.

IX. Baby cannot learn properly unless he is given the right toys for his age.

Toys help to teach. Play is just as important a part of baby's life as sleeping or eating. A baby learns through handling his toys. Be sure he has a chance to make and do things with them. Even a spoon and cup or boxes offer endless chances for learning and invention. Big toys are easier for little hands and help to develop the large muscles.

Mothers and fathers are the greatest teachers their children will ever have. It is hard for some parents to deal fairly as teachers because they cannot separate baby's behavior from their feeling of possession. The more mothers and fathers study, the less likely they are to be embarrassed and upset by any of their baby's poor behavior. They will not judge him as good or bad but will calmly go about teaching him better ways of acting. They have gained the spirit of the real teacher.

[NOTE.—In the January HYGEIA, Mrs. Oettinger's subject will be "Helping the Baby to Build Healthy Ways of Acting." Eating, sleeping and toilet habits will be considered.]

A baby learns through handling his toys. Big toys are easier for little hands and help to develop the large muscles.

A Housewife Looks at the Committee on Foods

By Doris W. McCray

III. Committee Acceptance of Gelatin

GELATIN is wholly a protein food, differing from most foods, which contain protein, carbohydrate and fat in varying proportions. It is used in the diet of well persons and in special diets for sick and convalescent persons. High grade gelatin does not contain any harmful chemicals or disease-producing organisms; it is prepared under sanitary conditions, and only sound meat products, such as trimmings, skins and bones of pork, beef and veal animals are used in its manufacture; it is properly dried and tightly packaged, so that it reaches the consumer in a wholesome condition.

Slaughtering of the animals used in the production of accepted gelatins is done under the supervision of government inspectors. All possible precautions are observed during preparation to prevent bacterial contamination of the gelatin. All operations are under laboratory control, and each lot of gelatin is separately tested.

High grade gelatin does not contain any germs of the type of the Bacillus coli, gas-forming bacteria, liquefiers or molds. You have at some time been able to observe the type of spoilage which occurs in beef or chicken soup which has not been properly refrigerated. A putrid odor develops, and bubbles of gas come up to the top. Perhaps you have also observed mold on the top of jellied chicken. Clean handling of fresh products, heating to the correct temperature, and final drying of the gelatin to the proper low moisture content are necessary to prevent such spoilage. No preservatives or artificial bleaching agents are used in high grade gelatin. The labels of bleached gelatin must declare the bleaching.

In order to be accepted by the Committee on Foods, gelatin should contain only traces of arsenic, copper, zinc or lead. This is extremely important from a health standpoint. Inadequate factory control by the laboratory or the use of impure chemicals may lead to objectionable contamination of the final gelatin by these elements. While it is true that these elements are present in foods naturally, their contact with certain utensils or the process of manufacture may cause the same substances to become highly toxic when they are added to foods. Every precaution should be taken at every step of the preparation of the food to see that it is not contaminated with arsenic, copper or lead.

When the Committee on Foods discovers, in the chemical analysis of a food submitted, that the amount of a chemical is too large, the manufacturer is informed of that situation. Manufacturers are, of course, willing and eager to act on the Committee recommendations for reducing objectionable contaminations in their products by modifying their methods of manufacture.

If the gelatin is a clean, wholesome product which meets the high standards and requirements of the Committee on Foods of the American Medical Association and if it is advertised in a truthful manner without misrepresentation or exaggeration of facts, it may be listed as accepted by the Committee on Foods. This acceptance carries permission to use the Seal of Acceptance in advertising matter and on the gelatin package and permission to advertise in the pages of HYGEIA and *The Journal of the American Medical Association*. An accepted gelatin must be prepared by the usual standard commercial methods; it must be free from toxic metallic contamination and must comply with food law requirements. The approved methods of preparation and the laboratory control over operations insure both the absence of disease-producing organisms or organisms which may impair the keeping qualities of gelatin, gels, or products containing the gelatin, and the quality of the gelatin as a wholesome food. Prepared gels may contain granulated cane sugar, gelatin, citric or tartaric acid, certified food color or vegetable color, and may be flavored with mint, lemon, lime, orange, cherry, loganberry, raspberry or strawberry extracts.

Food manufacturers did not at first realize the importance and significance of the federal regu-

lation of food coloring. Some even felt that this was a field in which interference was not necessary; but they readily saw the importance and the value of this federal regulation when its merits were explained to them. Compliance with the law gave them a "selling point" and the advantage of being able to assure purchasers that the food coloring was pure and did not contain any harmful ingredients. Fruit and vegetable colors are ordinarily used. Colors which are bright and clear are much more attractive than those which are dull, gray or muddy. Before a brand of gelatin is accepted by the Committee on Foods of the American Medical Association, the colors must comply with federal regulations. The colors commonly used in gelatin are: yellow (lemon flavor); green (mint or lime flavor); orange (orange flavor); red (a different shade of red for cherry flavor, strawberry flavor and raspberry flavor), and purple (grape or loganberry flavor).

The group of advertisers and food manufacturers, socially-minded citizens, who are working with the American Medical Association in getting more truthful messages about their foods before the public, and in putting more wholesome foods on the market, deserve our hearty support. They are anxious to tell the truth about their foods, because the truth will sell their products.

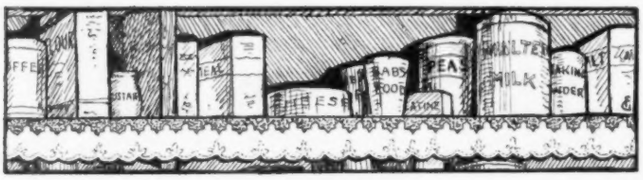
What actually is the truth, is not a matter for mere conjecture; it is the result of careful, scientific study of the problem from several angles. Some work has been reported which indicated that gelatin actually helped in the digestion of milk; however, after careful review of all scientific data, the Committee on Foods came to the conclusion that there is, at present, insufficient proof that gelatin helps to digest milk or milk products. Such claims, therefore, are not permissible.

The influence of the Committee on Foods of the American Medical Association, although a powerful social force, proceeds quietly and unknown to the majority of those who are benefited. The attention of advertisers has been brought to incorrect statements regarding food and nutrition, and suggestions have been made as to how these statements may be corrected to aline them with the newest knowledge of nutrition. Early advertisements of gelatin made claims which were unwarranted and based on insufficient scientific evidence. These claims are not seen today in the advertisements of the gelatin companies whose products have been accepted by the Committee on Foods. In order to make results authentic, research work must be done, and an account of the investigation must be published in a recognized scientific journal. Experiments must be carried on under correct conditions, and results must be checked and rechecked by the persons conducting the research. Much of the earlier work in food research is now obsolete because the methods used have since been proved inaccurate. A company is not justified in making unproved claims.

A food may be clean, wholesome and fit for human consumption, but the Committee requires that the terms "sterile," "sterilized" and "sterilization" shall be used in food advertising in their correct scientific significance only. Foods processed to be free from pathogenic organisms or to keep them sound and wholesome are not necessarily sterile; that is, they are not necessarily free from micro-organisms which are able to grow.

When any new advertising claims are made, or a company goes under new management, or

Gelatin makes other foods palatable, appetizing, colorful and appealing. The large gel consists of pears and marshmallows molded in cherry gelatin; the medium one is a strawberry Bavarian cream, and the smallest gels are molded salads of cream cheese, whipped into gelatin, combined with chopped celery and raisins, and topped with mayonnaise.



a new formula for manufacture is used, the matter goes before each member of the Committee on Foods for reconsideration and reacceptance of the product. This insures the public against any change which might make the product ineligible for acceptance. Often the wording of an advertisement may be entirely incorrect from the standpoint of a physician or scientist and so mislead the reading public.

Gelatin is used in the manufacture of ice cream, marshmallows, marshmallow frostings and other foods as a binder and to prevent granulation and consequent deterioration. It is used also by restaurants to give smoothness to the buttermilk served.

Gelatin comes to the housewife as a powder, practically odorless, colorless and tasteless. It dissolves readily and is combined with fruit juices to give it flavor and color. Gelatin may be purchased in the powdered form with powdered fruit acid mixed in it; this form is convenient for making desserts since it is not necessary to add any fruit acid in the home. Gelatin may be purchased with fruit acid, fruit flavor, coloring and sugar added; this form is very popular, since only water needs to be added before the product is poured into the mold. Chopped, sliced or diced fruits, vegetables or meats may be added, making appetizing, colorful and nutritious combinations. Gelatin is useful in making jellied soups, entrées, salads, desserts and candies and for making palatable certain foods which would not otherwise be relished.

Scientific data show that gelatin is a good food and has a proper place in the diet. A considerable quantity may be given to young infants, under the physician's orders, over fairly long periods of time without any unfavorable consequences. The gelatin is suitable for infants because it acts like protein matter, a factor on which gain in the infant's weight depends. Plain gelatin, being flavorless, is not objected to by the older infant, as are some foods. The older child on a mixed diet may be given servings of gelatin, as he would be given any other wholesome food, without special doctor's orders, since it has value as an easily digested protein food. A large serving of plain gelatin (½ pint or 1 cupful) furnishes about 15 calories of good protein. Four tablespoonfuls of sugar added would furnish 240 calories of good carbohydrate. Fruit juice and other added food would add value to the dish.

Plain gelatin, without added fruit acid, flavor, color or sugar, furnishes 3.4 calories per gram, or 98 calories per ounce. Since the caloric value of gelatin gel as it is generally used in cooking is low, and only a small amount is given in a serving, it is particularly advantageous in those meals in which added calories are undesirable. At the end of a heavy meal, some sort of a pretty gelatin dessert furnishes a small amount of easily digested food and the sweet good flavor that finishes a meal with satisfaction. Gelatin is not a suitable protein to be used as the sole protein food over a long period, but it is useful in a mixed diet which includes other proteins. As a general rule, it is a suitable food in light diets and liquid diets.

The fact that gelatin is entirely free from carbohydrate makes it useful in preparation of meals for persons requiring a carbohydrate-restricted diet, provided they have good tolerance for a limited amount of protein. Saccharin may be used instead of sugar for sweetening gelatin dishes in the carbohydrate-restricted menu. Often the small amount of natural fruit sugar found in fruit juice can be allowed, and it adds greatly to the palatability of the gelatin; salads and entrées are good without sugar. The physician's orders should be followed precisely in the preparation of foods for sick persons. Often the patient can tolerate a limited amount of carbohydrate and a limited amount of protein. Gelatin is especially suitable in such diets, since it adds to the beauty of foods as well as to their delicacy and flavor. The palatability of raw eggs, beef broth, raw liver and gruel can be greatly enhanced by the addition of gelatin. Even milk and orange juice may be jellied.

Plain gelatin is ordinarily used in the proportion of 1 level tablespoonful for 1 pint of liquid. It is soaked in cold water after which boiling liquid is added, or it is melted in a bowl set over hot water. In following recipes, do not greatly increase the amount of fruit juice or use much stronger juice than is indicated, since this may produce unpleasant sourness; it may also delay the setting of the gelatin or prevent setting entirely. Juice is drained from fruit and measured as liquid. Fresh pineapple and its juice must be brought to the boiling point before being added to a gelatin dessert, since this fruit contains an enzyme which dissolves, or digests, gelatin; canned pineapple, having already been cooked, does not present this difficulty, nor do other fruits.

The companies give directions for the use of their gelatins. Ordinarily one package of colored and flavored gelatin dessert is dissolved in 1 pint of hot water, cooled and chilled. Some time can be saved by dissolving it thoroughly in ½ cupful of hot water and then adding 1½ cupfuls of cold water. Individual molds set more quickly than large ones and can be placed in the freezing tray of the refrigerator or on cracked ice until the gel is firm. The gel should be chilled until it sets into a soft jelly which

flows slowly, before one folds into it pieces of fruit, meat or vegetables; these will then be held in suspension throughout the gel; but if they are added to the hot gelatin, they will either float or sink to the bottom, and the heat may soften their crispness.

When gelatin has cooled until it begins to thicken, it may be beaten with an egg beater to increase its volume greatly and make an attractive whipped-up dessert which is called a "whip." If stiffly beaten egg whites which have been slightly sweetened are added to this, by being carefully folded in, the protein is greatly increased in quantity and quality; this dessert is called a "sponge." Thoroughly beaten egg yolks added to the beaten gelatin will add some fat and fat-soluble vitamin as well as color and a distinctive flavor. This dish is designated as a "soufflé."

A "Bavarian cream" consists of whipped gelatin with whipped cream folded in. This makes a dessert which is high in fat content yet less "rich" than the same amount of whipping cream used without the gelatin; it also affords a greater number of servings. A "charlotte" is made by lining a mold with left-over sponge cake or lady fingers and filling it with a Bavarian cream, sponge, or custard mixture. A "blanc mange" is made of gelatin, sugar, flavoring and milk instead of water, an excellent way to use milk in an appetizing light dessert. Molded custard, consisting of eggs, milk, gelatin and flavoring is a change from the boiled or baked custard. A "chartreuse" consists of a cake with the center portion cut out and the cavity filled with a jellied fruit or cream mixture. It is attractive and is a suitable dessert for children, when a simple sponge or angel cake is used. Gelatin pies have enjoyed huge popularity because they are so easy to make and so delicious. A crust of pastry or crushed graham crackers is filled with any of the various gelatin mixtures. A large proportion of fruit with just enough fruit gelatin to hold the fruit in suspension will make a tempting pie.

The many, many ways of combining meats, vegetables, small amounts of left-overs, crisp green vegetables and other ingredients into salads or entrées are fascinating. For these ideas I refer you to that modern advertising which displays art, culinary achievement, and statements regarding nutrition which are accepted by the American Medical Association Committee on Foods.

[NOTE.—In the January HYGEIA, Mrs. McCray will discuss cereals. Lists of the accepted foods discussed each month will be sent on receipt of a stamped, self addressed envelop.]

What's in Store for 1934?

The January Number Will Bring:

A few thoughts for the New Year on "The Job of Being a Parent," in which *Dr. Ira S. Wile* declares that "Honest social trusteeship is the essence of the job of parenthood." "Parents are social trustees," says Dr. Wile, "rather than individuals deriving personal pleasure and satisfaction from their own creation. Parents are responsible to society for the offspring whom they bring into the world and who must be taught and trained to participate in social living." What this trusteeship involves will give conscientious parents much food for thought as the New Year begins.

Anna Steese Richardson's excellent advice for the coming year and years: "Give Your Doctor a Break!" "Mrs. Hale," writes Mrs. Richardson, "was in a state of mind. 'I do think the American doctors have gone berserk on diet,' she exclaimed, 'but if Dr. Wilson thinks he's going to turn my home upside down and make me prepare two sets of meals, he's mistaken.' Her voice was tinged with bitterness as she pointed at a slip of paper which had been flung on the coffee table by her impatient hand."

"Years of Progress in the Home," in which *Joan White* gives a review of the past, a survey of the present and a glimpse into the future.

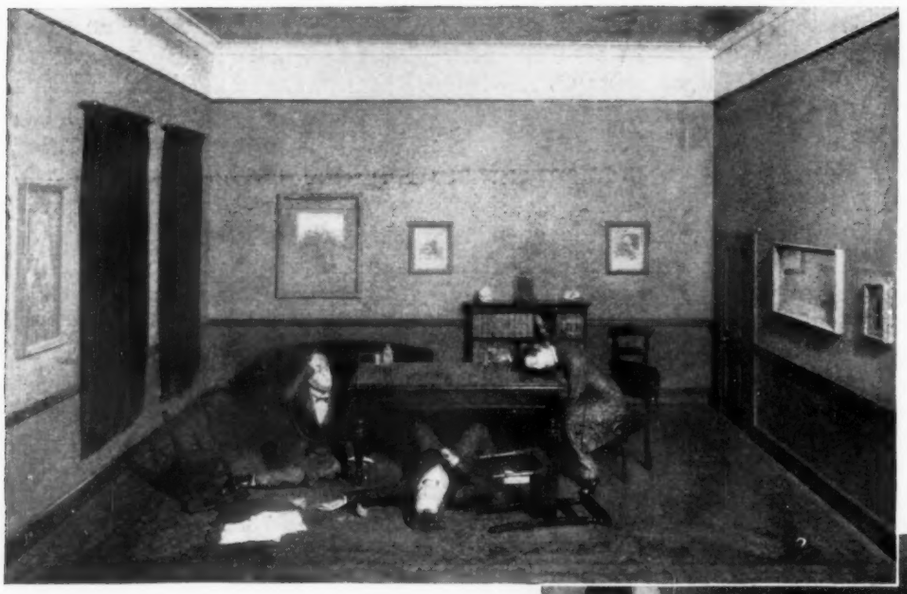
A "new deal" for baby. Is your child one of those who "just will not eat"? Does your child think that he can get what he wants if only he cries long enough and loudly enough? If so, you will want to know what *Katherine Brownell Oettinger* has to say about helping baby to build healthful ways of acting.

Another of *Dr. Robert H. Brotman's* articles on the teeth. In "Tooth Decay," Dr. Brotman tells why and how "caries carries on" and what to do about it. He concludes his article with the sage advice, "Be true to your teeth or they will be false for you!"

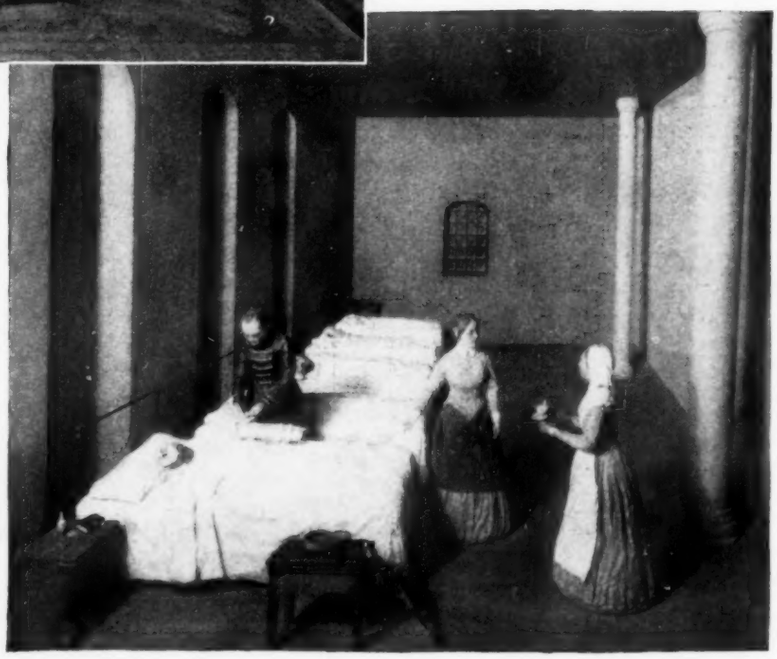
If you toe in or toe out, if you have flatfoot, weak foot, "athlete's foot," bunions, corns, callosities or large ankles, you will be interested in the article on "Foot Comfort" by *Beulah France*, R.N., who reports her interview with an orthopedic specialist.

Pauline Myers' story, "When Science Came to Lost Creek"; as tense a situation as one could find in drama —and yet just one of the many dramatic episodes of the physician's daily life.

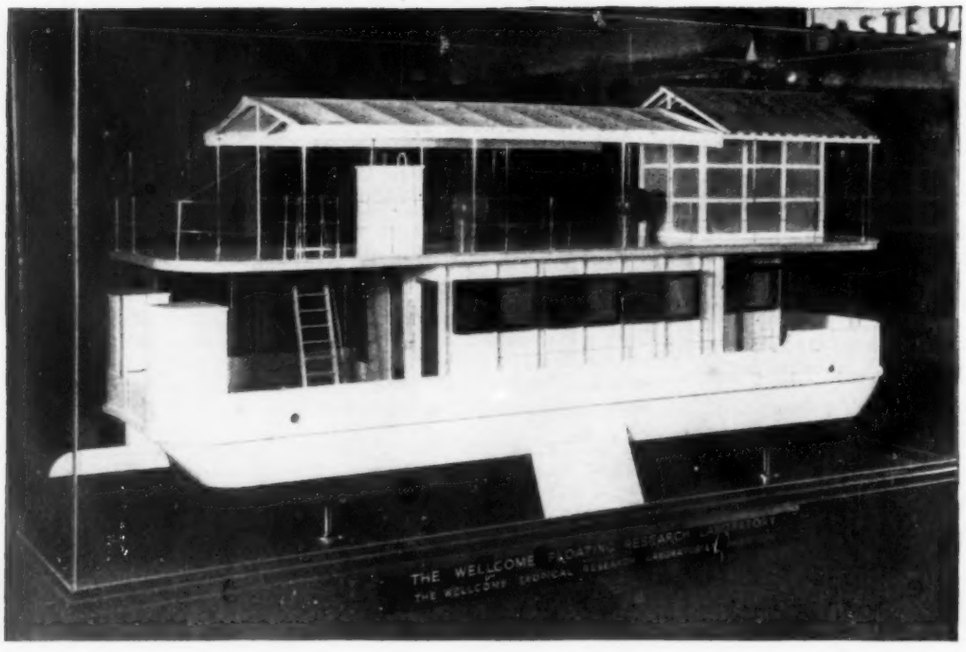
"High Lights on Low Blood Pressure," by *Dr. Wingate M. Johnson*, whose article "The Low Down on High Blood Pressure" appeared in an earlier issue of *Hygeia*.



Discovery of anesthetic properties of chloroform by Sir James Young Simpson at Glasgow, Scotland (1847)



New hygienic standards for military nursing established by Florence Nightingale during Crimean War (1854-1856)



The Wellcome floating research laboratory, fully equipped with scientific appliances for tropical study and experimentation

Exhibits

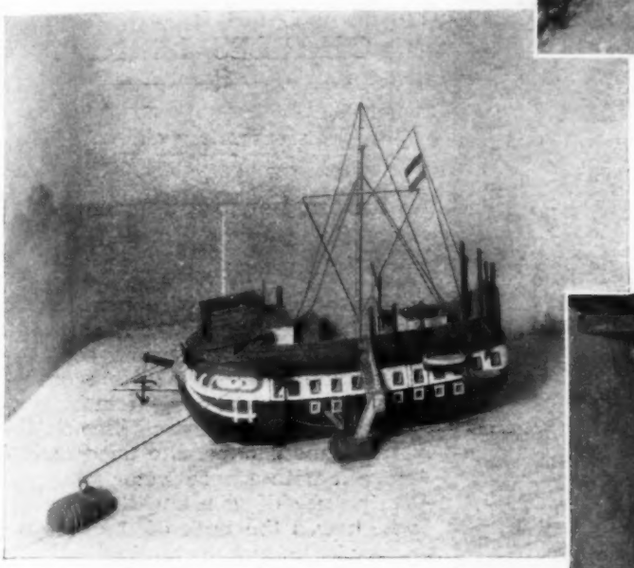
from the

WELLCOME RESEARCH INSTITUTION

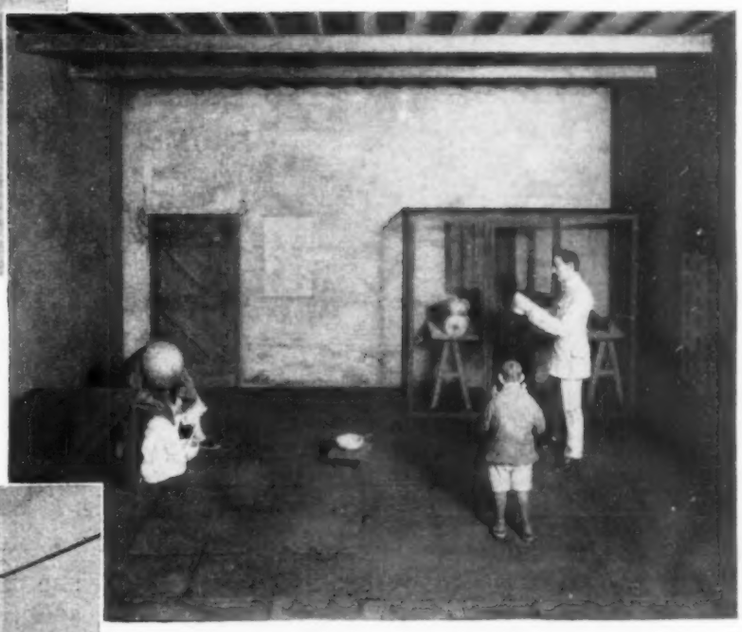
at

A Century of Progress

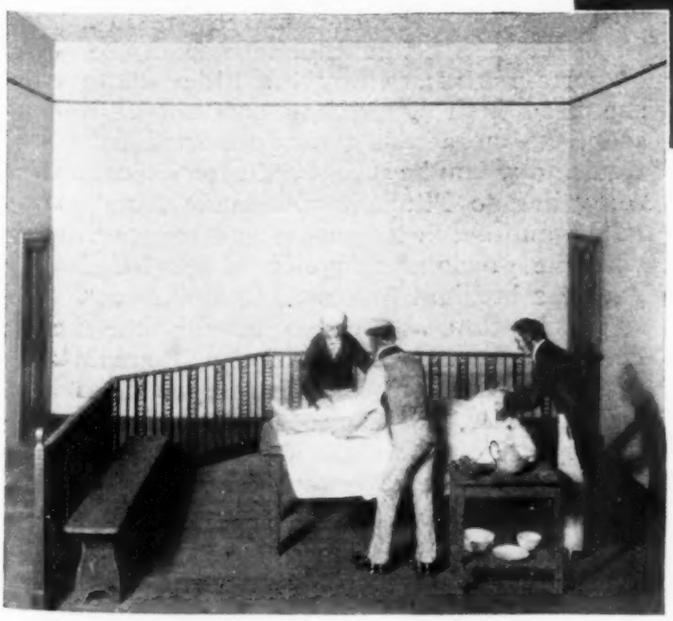
Summer house of Edward Jenner, where he performed the first successful vaccination against smallpox (1796)



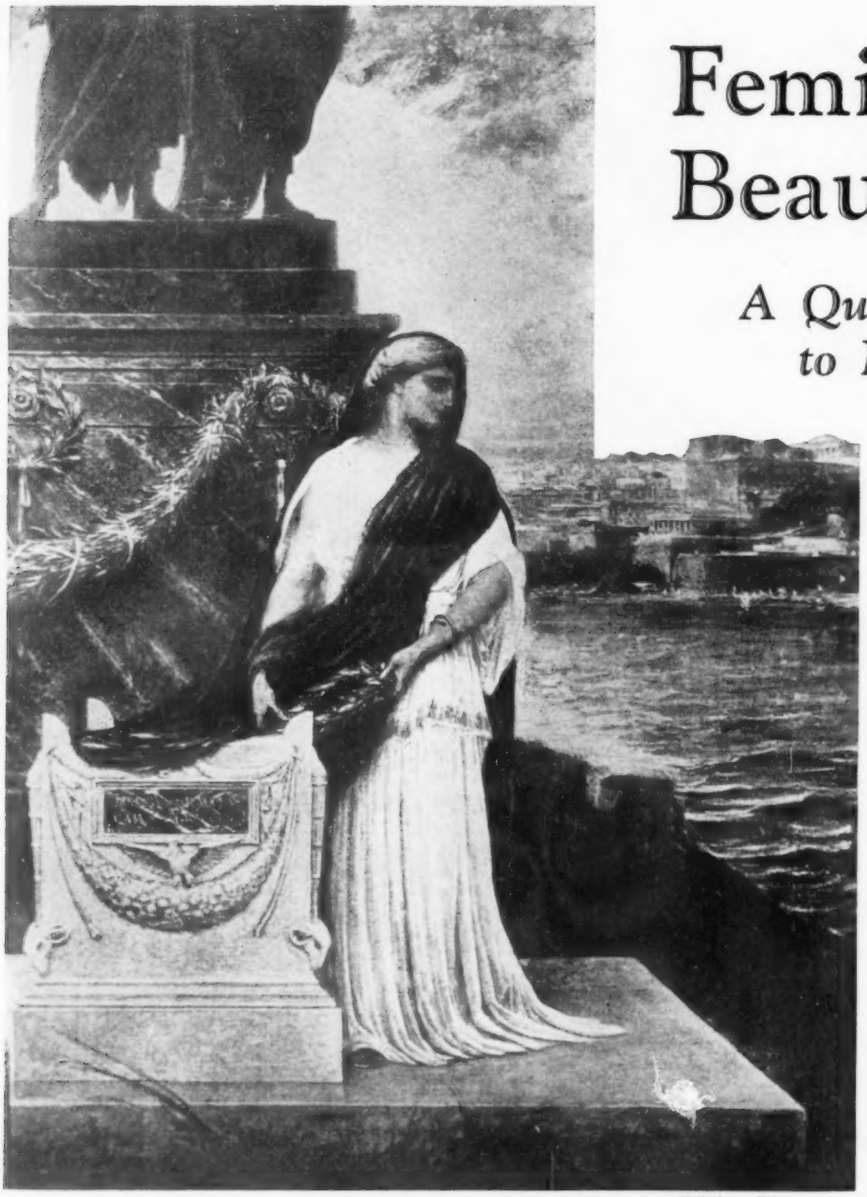
A quarantine ship, the Dreadnought, used during the nineteenth century in the British Isles for the detention of persons in whom infection was suspected



A diorama showing Sir Patrick Manson, Father of Tropical Medicine



Robert Liston, performing the first operation in England under ether anesthetic at the University College Hospital, London (December, 1846)



William Thompson

In Cornelia, mother of the Gracchi, the best virtues and beauty of the Roman matron were combined. (From the painting by Lionel Royer.)

Feminine Beautification:

A Quest from Ancient to Modern Times

By

CHARLES LERNER

Part II

Among her many procedures, one finds, according to Constantin James:

> The application of a poultice of bread and milk over the face before retiring, which was removed with a strigile; the cataplasma made from large beans cooked in butter; and, as these treatments invariably left a rancid odor, she tried to remove it with a pure water followed by the use of alenium, the base of which was the milk of the she-ass, or, by lomentum made of wheat and perfumed with the Myrrh of Judea; the fashionable cosmetic of the day, the cream of Athens, was a preparation which owed its oiliness to lanolin (suint) and which, according to Ovid, had a nauseating odor.

For pimples and blackheads the Roman lady used a precious mucilage from the nests of certain birds. Pliny the Elder states that she used both liquid and soft soap. Liquid soap, the more costly, was imported from the Gauls, to whom he gives credit for its invention. According to Pliny, it was made from goat's tallow and beech tree ashes and was perfumed with the precious cinnamon of Persia. It imparted a brilliant tint to the hair, and it is not surprising that, as a consequence of the use of these soaps, the hands of the Roman lady required some serious attention; no doubt the scalp did also, and as a soothing application she employed the milk of the she-ass.

Her eyes were given special attention. She adopted from the Asiatics the custom of shading or coloring the lids, brows and lashes with antimony. This practice, however, goes back to the earliest ages; it is also mentioned in the

WHEN the Roman warriors returned from their conquests in Greece, they brought with them Greek beauty doctors so that the Roman ladies might attain the perfection of beauty held by the Greek women. Where in literature does one find greater elaboration of the art of feminine beautification than among the Romans? Ovid in his "Medicimina Faciae Feminae"; Martial in his witty "Epigrams"; Juvenal; Varro, the great contemporary of Cicero; Josephus, the famous Jewish historian; Cato, the great philosopher; Pliny the Elder; Horace, and the learned Propertius, all, in their respective works, did not hesitate to give the Roman lady formulas and specific instructions for beauty. Later, however, they criticized her caustically; for, in their belief, she carried the operation too far.

Bible in the Books of Isaiah and Jeremiah; Ezekiel reproaches the daughters of Israel for painting their eyes to please strangers. Like modern women, the women of ancient Rome were constantly trying newer methods of shading the eyes. Even the use of graphite, a vogue which proved popular with the Roman woman, finally yielded to a more modern one. Ovid suggested that she paint the eyes, and he gave details in his manuscript about the procedure:

> Do not hesitate to darken the eyes with fusin, or better yet, the saffron gathered near your banks, O, Cydnus!

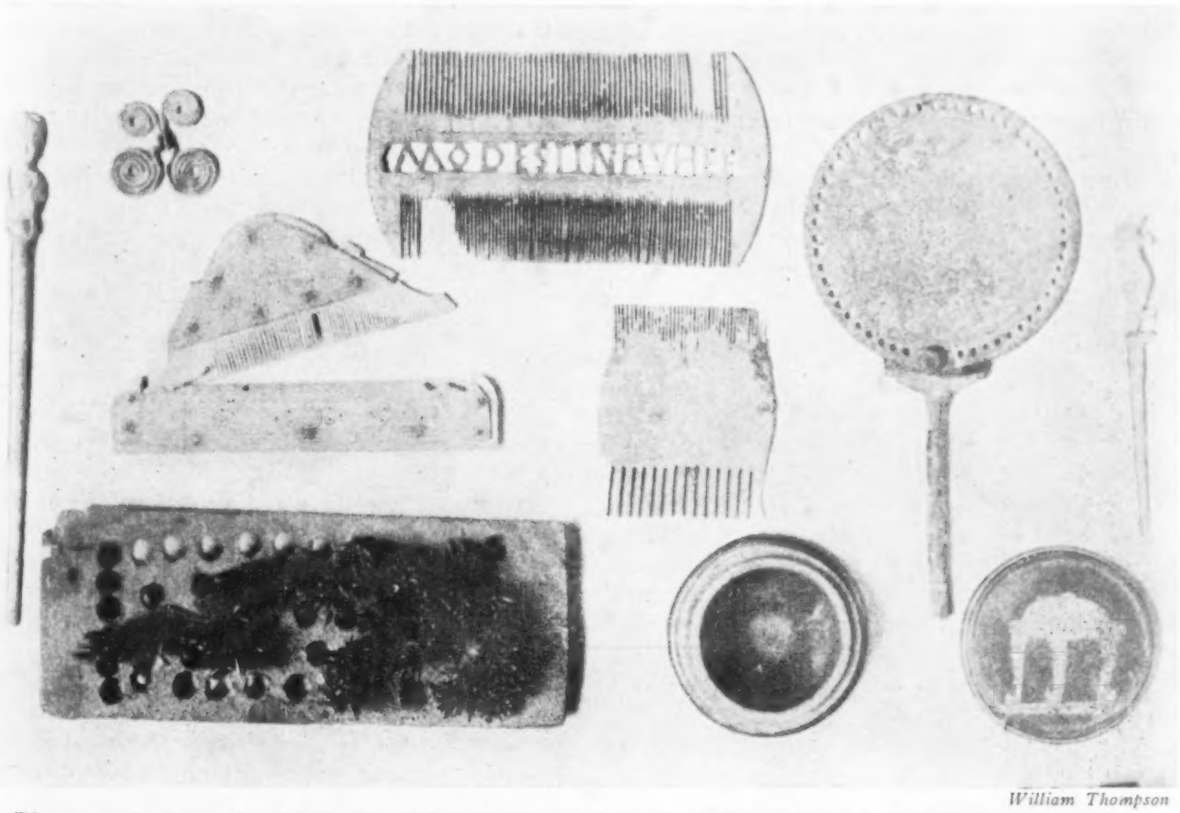
He also instructed her to blow a light powder under the eyes that they might appear larger; and in order to make the eyebrows longer, he recommended lengthening the arc, artfully. Juvenal suggested the use of a needle dipped in soot for this purpose, but Pliny preferred ant's eggs burned, broken, and crushed. It seems that the material used did not matter, so long as the desired result was obtained. Martial did not hesitate to make some caustic comments, such as, "Why do you persist in plaguing me with eyebrows you made this morning?" And Constantin James comments, "Evidently at that time it was the habit for one to take the eyebrows out of a box."

The use of beauty spots, which was also, incidentally, the rage at the end of the seventeenth century, was common among the Romans. The small, round, black plasters which they used were called splenia (a variety of seed placed on the skin). Martial in his "Epigrams" remarks, "A number of beauty spots covered her superb forehead." They may have been used for two purposes: first, to simulate moles, and second, to hide other cosmetic defects. Ovid remarks: "Few spaces are without spots." James declares that at the time of his writing, this practice was prevalent among the women of Tunis, who painted marks on their cheeks with an infusion of Gaul nuts or saffron. Instead of circles and spots, however, they made bizarre designs of leaves or of other objects.

As a final touch to her beauty, the Roman lady attached extremely high value to the neatness and beauty of the hair. She resorted to hair dyes with perhaps as much eagerness as the modern flapper, and the famous Pliny gives the formula of one that was evidently popular at the time:

> Take a pint of leeches and two quarts of pure vinegar; pound them into a vase and ferment for sixty days. At the end of this time rub into the scalp in the sunlight and the hair will become beautifully black. Do not forget during the operation to hold oil in the mouth, without which your teeth will take the same tint.

The Roman lady used a walnut dye acquired from the Britons, while the blonde tints were procured by the use of "herbs of Germany," and the red tints were obtained from a caustic soap imported from the Teutons. Ovid, the famous



William Thompson

These ancient Greek and Roman toilet articles substantiate the statement that there is nothing new under the sun. They are made of silver and include combs, pins, a mirror, a brush and a rouge jar. (From an exhibit in the British Museum, London.)

poet, warned the Roman ladies: "I tell you cease drugging your hair." He suggested the use of deer marrow as a hair dressing, and Pliny endorsed the use of pomades but warned against the use of those which contained certain harmful drugs. He recommended others, which contained ingredients in use to the present day. As a sign of mourning or supreme detachment from all worldly things, the Roman lady sprinkled ashes on her tresses.

The coiffure of the Roman lady required much care, and the procedure was always accompanied by a good deal of excitement. One maid brought the silver basin in which she washed her mistress' hair; another carried a pitcher filled with perfumed water, while a third maiden carried a silver tray with the lady's combs and brushes. While the hair was being shampooed, the second maiden prepared curling papers of papyrus and heated the curling irons in hot ashes. The third held a large mirror in position that her mistress might follow the entire procedure of the coiffure.

Few hairdressing procedures went through without the shedding of tears and blood. The least punishment to these unfortunate maidens was a severe slap on the cheek; but more often the transgressor was stripped to the waist and lashed until blood was drawn. Martial states that the Roman lady did not go at it dead-handed, especially when she expected the final result to be a work of perfection. Juvenal relates of the unfortunate handmaiden Psecas, who fell under the blows of her mistress and had her hair pulled out. It was not unusual for the enraged Roman mistress to call an executioner to punish the maiden for such a grave misdemeanor as the misplacing of a curl, pin or buckle. The learned Propertius tells us that after having seen the transgressor beaten and wounded the Roman lady would light-heartedly return to her fashion journal and allow the other maids to proceed.

Our lady used great discretion in her choice of colors. According to Ovid, if she desired sympathy and pity or was in a melancholy state of mind, she used a layer of white lead; and in case of necessity, according to Martial, she used chalk. This author apparently found much delight in taunting two famous beauties with the following quip: "That which Fabulla uses is afraid of rain, and the lead Sabella uses is afraid of the sun." When our lady desired to stir compassion in the breast of the male, she had to be pale, as that was considered the only color becoming to a woman in love. Horace suggested the use of an infusion of camomile to discolor the lady's features; in like manner the ladies of the seventeenth century resorted to vinegar to blanch the skin. To the Roman lady, a dark skin was abominable, and she would go to extremes to attain marble-like features. When she desired the tints, she used skilfully prepared colors as prescribed by Ovid: "The light vermilion color, the blood refuses to give, can be given by art."

Even Tibullius spoke in sarcasm when he said, "What's the use of lighting up your cheeks with a sparkling paint?"

Horace states that in Rome the lady had three kinds of paints, *minu*, or red lead; carmine, and a certain extract of crocodiles. She used them not only to lend color to her cheeks but also to hide the ravages of age. She even resorted to preventives against wrinkles for which, Varro states, she used an astringent called *tentipellium*.

The Roman writers found many reasons for casting epigrams against the fair sex, and among some of the most famous of these satirical sayings, one finds the following:

You sleep without your face.

You have a beautiful complexion, but not a beautiful skin.

Be careful, Edile does not see you, or hear you, a picture which talks is a rarity.—*Martial.*

Your heart rises at the sight of that scum which is on your cheeks and which drops down on your chest.—*Ovid.*

This coated face which is covered with so many drugs, and where unfortunate husbands press their lips, is it a face or a sore?—*Juvenal.*

The best face is still the natural face!—*Propertius.*

Cold cream, a popular cosmetic of the modern woman, is not as new as one is likely to believe. Galen, the celebrated Roman physician, is credited with its invention nearly eighteen hundred years ago; today, cosmetic chemists use the same formula with but slight modification.

Like the Roman lady, the woman of the medieval period did not hesitate to go to extremes in beautifying herself. She used rouge and face enamel, and she gilded her hair with a concoction composed of droppings of swallows, gray succinum, burnt bear claws, and lizard tallow. She tweezed her brows with special tweezers, and to remove blackheads she used, according to Merjkowsky, "the milk of a she-ass and a red she-goat infused in wild anise, asparagus roots, and the bulbs of white lilies"; this mixture was aged in warm horse manure and filtered through a felt strainer. Into this filtered liquid, she dipped soft sweet-bread and rubbed her face with it, "for as long as it takes to say the credo thrice."

Thus after glimpses over the pages of the past, one finds beauty ever the goal of women, and one wonders what savage or civilized people did not have this weakness!

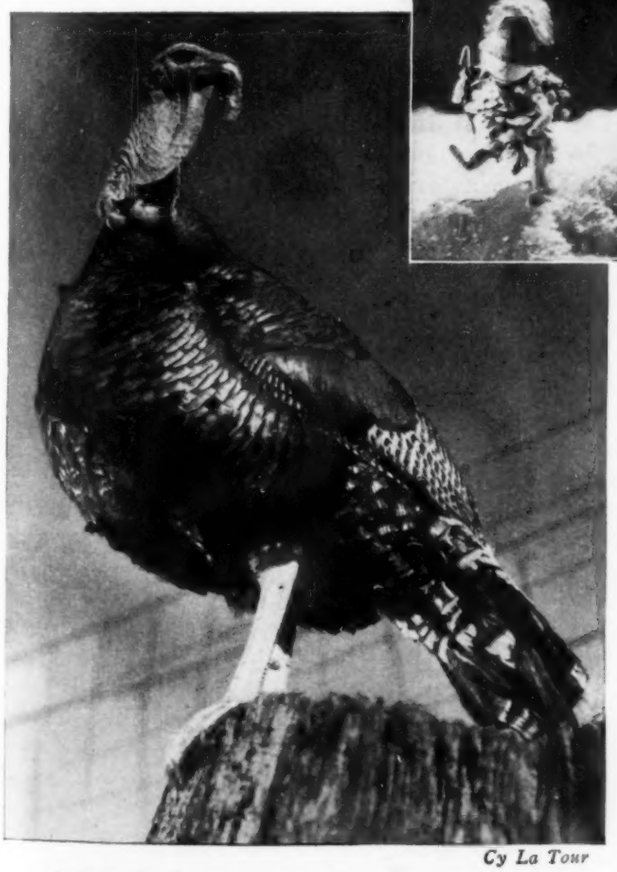
In beauty culture, artifice becomes an art. In the January issue, Dr. Lerner will describe this art as it is practiced by the modern woman.

Harbingers of the Holidays

J. Jay Hirz

Christmas in England is heralded by this scene showing London bakery girls mixing a ton of plum duff under the watchful eye of the chef. Without plum duff, Christmas would not be Christmas for them.

H. Armstrong Roberts



Cy La Tour

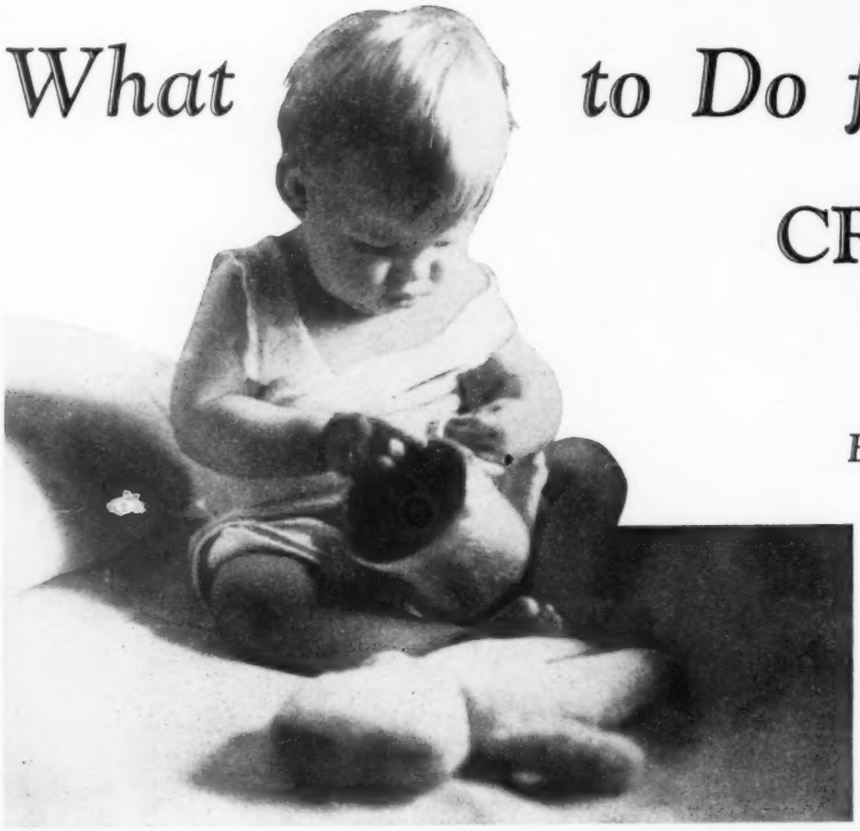
Don't look so sure of your perch, Mr. Gobbler! Soon you will be just another platterful of golden brown holiday fowl.

Century—Allen

Iowa snow does not keep this youngster from playing Santa.

What to Do for the CROSS-EYED CHILD

By J. Robert Burke



One of the eyes fails to keep its alinement, especially when the child is looking at some object held in his hand.

Alvina Leuke Studios

MOST persons at some time have been made aware of the problem of the cross-eyed child. The condition may have arisen in the immediate family or in the child of a relative or dear friend. It is especially dramatic if it occurs in a beautiful girl whose curls and complexion are to be envied and whose sparkling eyes have previously always added to her charm and attractiveness.

I shall mention only incidentally the cases of paralyzed eye muscles which have resulted secondarily from some severe systemic disease or injury to the skull or from a primary injury to the eyeball itself. The "turned eye" resulting from these serious conditions is accepted as an unfortunate result, but there is so much relief experienced by parents because the child is still alive that no matter how badly the eye may be turned, the parents consider themselves lucky to be let off with such a slight aftermath.

But consider how parents feel when they first notice that one of the child's eyes seems to ramble. At first they assume it is simply the rambling that occurs normally in the eyes of an infant before fixation in the eyes takes place. Later a friend tactlessly remarks to the mother that there is something the matter with the child's eyes. Then there is real alarm on the parents' part, and in too many cases alibis, such as that the child is tired or has looked at too many picture books, are established to account for the defect. Parents will not admit to themselves at first that there can be any defect in their child, because they produced the child, and since he is a part of them, he cannot possibly have any physical fault. If measles or scarlet fever develop in the child, they simply blame some friend or neighbor's child for having carried the disease into their home; and even though there may be some permanent disability resulting from the infection, they take it rather philosophically because they believe that they have not had any direct part in the affair.

If a defect is noticed in the child's eyes, sensible parents will immediately take him to their oculist; if they have not had occasion to consult one previously, they will naturally present the problem to the family physician, and he will suggest one. Oculists usually advise the wearing of glasses or at least the taking of eye exercises, depending on the age of the child and the observations made. Parents who cannot reconcile themselves to the condition will procrastinate, with the hope that the child will outgrow it. During this period valuable time is being lost. They will console themselves by saying that the eye does not turn all the time but simply when the child is tired or when he attempts to look at close objects.

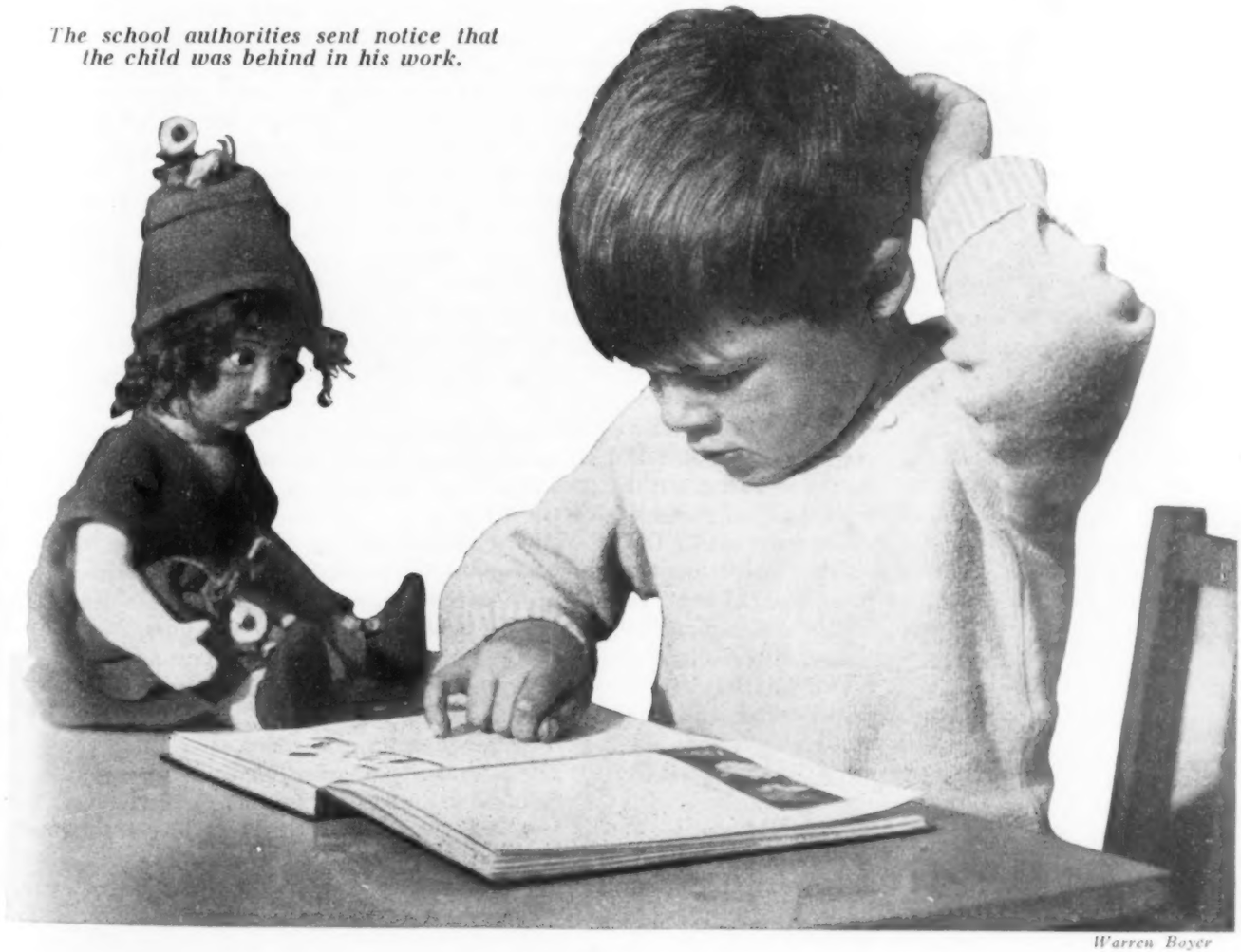
In most instances the child has a refractive error; that is, he may be farsighted (hyperopic); nearsighted (myopic), or astigmatic; or he may suffer from a combination of these conditions. As a rule, in hyperopic cases the eye turns in, and in myopic cases it turns out; but as in everything else, there are variations to these rules.

In the more common cases the child has been perfectly normal up to the age of about 2 years, when it is noticed that one of the eyes fails to keep its proper alinement, especially when the child is looking at some object held in his hand. Because of the existing refractive error and the increased amount of observation of small objects, the latent defect is brought out. Until the child began to study small objects more closely, the two eyes functioned well together, and fusion, "the process by which two distinct visual impressions conveyed from the right and left eyes to the brain are merged into a single sensory impression," was taking place. However, the more the eyes were used in this close work, the more strain was put on the weak muscle which received its impulses from a nerve; and in the attempt to compensate for that weakness the muscle had been overstimulated and an overcorrection had taken place, which turned the eyeball beyond the point where it should come to rest to be in proper alinement with its mate.

When this happened, a temporary diplopia, or double vision, was produced, as the two eyes showed two images since they were not in alinement. This double vision was confusing to the child, and as the condition progressed, he was dismayed when he reached for what he considered the true object, because it was not there. He was too young to tell about this strange phenomenon, so he began to figure things out for himself. Children at that age are intelligent, and he found that if he closed one eye he saw only one object and could grasp it immediately. He was too busy with his hands to consider for a moment the possibility of holding one eye closed when this incident occurred; hence he learned that he could throw the offending eye out of the picture by not using it, even though it was open. In using a microscope or telescope, one can keep both eyes open and suppress the nonworking eye so that anything one may see with it will not interfere with the object being observed through a lens. The child did the same thing; from then on he used one eye all the time. At intervals the offending eye would come in and bother him, but by further throwing it out of alinement he corrected that. Now he knows that the farther out of alinement he can throw it, the better off he will be. Hence the turned eye results.

Every one knows, also, that if an arm is kept in a sling for a long period of time it does not function well afterward until the muscles have had proper exercise or treatment. Weakness of sight from long disuse is called amblyopia exanopsia. The longer the period in which the

The school authorities sent notice that the child was behind in his work.



Warren Boyer

eye is not used, the greater is the amblyopia produced and the more difficult it will be to make the two eyes work well together. Some parents think that if they wait until the child is old enough, the muscles can be operated on and everything will be satisfactory; but if during all this time the eye has not been used, it will remain in good position for a while, following the operation for straightening; then it will have a tendency to turn out. The so-called wall-eyed condition will result; incidentally, this condition is more noticeable than the "turned in" eye.

Now one can understand why the oculist has prescribed glasses and exercises. In prescribing lenses to be worn he is using one method to promote vision in the weaker eye. The glass worn before the stronger eye is one that purposely blurs the vision in that eye so that the child cannot see as well with it as without it. As the refractive error is now corrected in the turning eye, the child is better able to see with it; therefore since his better eye is blurred so much, he is obliged to fall back on use of the weaker one. If the parents refuse to allow the child to wear glasses all the time, other methods are utilized.

It is unfair to any child to deprive him of the correction of a refractive error. He is handicapped immediately. The same parents who would not object for a moment to having a child wear unsightly bands on crooked teeth or a brace on a deformed foot are most emphatic in saying that they would never think of putting glasses on their child. They speak their minds before the child, and he immediately develops an intense dislike for glasses. I have seen women almost faint and others become speechless when it was suggested that the child should wear glasses. What is the reason for this mental attitude? They excuse themselves by saying that if the child fell, the eye might be injured by broken glass, but the risk is extremely slight; on the other hand, many eyes have been saved by the glass which stopped a small rapidly moving foreign body from penetrating the eyeball. The real reason behind the objection is one of false pride. The parents believe that the child is made more conspicuous by wearing of glasses, but really they have not the best interest of the child at heart and allow a selfish motive to prevent proper treatment. I will admit that in extremely rare instances a "turned" eye has righted itself without treatment, but it is too great a risk to take.

A number of methods may be used in the attempt to retain or promote vision in the offending eye. The good eye may be covered by a shield so that all the vision is obtained with the weaker eye. The child objects strongly at first, because the objects are not as clear as when they were seen with his good eye. If he persists in removing the shield, drops that will temporarily paralyze his power of accommodating his vision for near objects may be instilled in the good eye, and he will then be obliged to use the weaker eye. At the same time an amblyoscope of some type should be used to encourage vision in the affected eye; later, stereoscopic exercises that will give perception of relief or of depth of objects are added to develop fusion. Various instruments may be used in order that the child may draw a rough picture which he sees with the involved eye; this picture is drawn on paper in front of the bad eye, while the good eye is not allowed to see the drawing. By a transfer of the mental image the child is able to reproduce it. Of course a proper lens correction of the refractive error is worn during all these exercises.

The question is usually asked about the length of time the glasses will have to be worn, and it is difficult to answer it truthfully. All cases are different. Some children will be obliged to wear glasses until the age of 6 or 8 years; others may have to wear them through life; but no one can set a definite time until the case has been watched for a long period.

The results are good if the patient is seen early and proper treatment is persistently carried out. Some persons expect the eyes to straighten as soon as glasses are put on, but that rarely happens. Patience and conscientious treatment are necessary for the best results.

Often parents who refused the suggestion of glasses or treatment a few years before bring in the child after he has started attending school. They say that they now want him to have glasses and exercises as they have received a notice from the school authorities that the child's vision is extremely low in one eye; being unable to see the blackboard properly, he is behind in his work. The information is not always volunteered, but too often the child has come home and told that some schoolmates have referred to his eyes in the unkind terms that thoughtless children often use. There is great danger, at this point, that a child may develop an inferiority complex with its far-reaching complications. The parents are quite willing to cooperate, now that the child is beginning to complain of the defect.

The economic phase which will arise in later life when the boy or girl seeks a position is a most important one. An unusually brilliant person will probably succeed in spite of crossed eyes; but in the case of the average individual it may be enough of a handicap to mean the slight difference between securing a position and not securing one.

The social aspects are easily understood, and I should be distressed and feel quite chagrined if my adolescent son or daughter came to me some day and asked, rationally, why something had not been done to straighten the eyes when the condition was first noticed.

Sex Education:

VI. The Period of Adolescence

By THURMAN B. RICE

MANY sex problems have their origin before the age of puberty and adolescence, but the problems that arise at these times are much more urgent and difficult than those of the earlier years. This is the period of anxiety for parents. It is a time when the patience of the elders is sorely tried and frequently found wanting. Giggling, "wise-cracking" sophomores are the last word in the way of a nuisance to those sedate folk who have more or less safely passed through the same stage and have lived long enough to forget about it.

This is the time, if ever, when young people really need help and understanding. It is a time when powerful and utterly new forces are arising in them. New impulses are driving them they know not where. Elated with the new sensation of being comparatively grown up, and intoxicated with the previously unknown freedom which is usually granted them, they go plunging from one extreme to another. While there is some doubt about the matter of their maturity they must do everything possible to prove that they are grown up; therefore the boys learn to smoke and to swear great and supposedly manly oaths. They affect deep knowledge of women and girls and tell of their conquests with this and that and the other one. They rarely if ever drive a car under 70 miles an hour, if one is to believe everything that one hears. It is, of course, obvious to those who understand something of the psychology of the period that they are overcompensating for their all too evident inexperience—whistling to prove that they are unafraid.

The girl usually passes through a "boy-struck" period. She giggles and makes herself conspicuous. Unless carefully controlled or endowed with unusual reserve she is likely to indulge in excessively high heels, extremes in dress and large use of cosmetics. During this period of unrest she is sadly in need of intelligent and sympathetic guidance. Such guidance, however, is likely to be extremely distasteful to her. It will be impossible for parents who have neglected the matter of sex education until this time to pick up the reins of control and go serenely forward. Only those children who have been gradually led up to a realization of the forces at

Adolescence is a period of much dreaming and idealization, a period which requires intelligent and sympathetic guidance.

work within themselves will be in a position to appreciate the advice that wise parents can give. How may a mother who has told her daughter that babies slid down rainbows now hope to get control of the situation? Long before the time of adolescence the children have learned that their parents either are or are not sources of accurate information on the subject. They may be expected to behave accordingly.

In the continuation of sex education into the period of adolescence the parent or teacher must know that generalities are no longer sufficient. It is not enough to tell them to behave themselves and to be good children. A concrete and detailed instruction in vital matters in which they may be concerned now becomes a necessity. By this I do not mean that every episode in sex life must be carefully diagrammed but rather that the problems which the boys or girls are likely to meet should be discussed with them in a perfectly natural manner. It will, indeed, be well if the instruction is so natural and so unassumed that the boy or girl

The adolescent athlete frequently shows a fine scorn for the members of the so-called weaker sex.

is hardly conscious that he has been instructed. Young people of this age should be included in the family conversation about many matters related to the subject of sex.

It is presumed that adolescent boys and girls have had their minds thoroughly satisfied concerning the positive and beautiful phases of the subject. They are then ready to have some of the negative phases mentioned. This part of the education must not be made so graphic that it shocks or alarms, but these young people should know about the possibilities of conception out of wedlock, and they should realize that under such circumstances the mother and child are nearly sure to suffer severely from the social stigma which such a birth imposes. They should know something of venereal disease, which is perfectly capable of ruining them, their loved ones and their careers. They should know of the depreciation of character that invariably follows the cheap promiscuity which seems so enticing under certain circumstances. These are not pleasant matters to explain, but children of this age should be treated somewhat as men and women though they are still boys and girls. Life is coming to be real at this period; it is becoming rather earnest. Young people will appreciate the confidence that is shown when such matters are frankly discussed, and they will really be grateful though they may seem not to be so.

It is perfectly possible for boys and girls of the age under discussion to be parents of children. Since this is the case, the careful parent can do no less than explain to his children something of the details of the sexual act. Only those who are wilfully blind will pretend that it is possible or desirable to keep young people of this age ignorant of so vital a function. If there were any assurance that they might obtain such information in a relatively truthful form, there would be less need to insist on parental instruction; but there is absolutely no such assurance. It is doubtful whether there is so much misinformation on any other known subject. It is not so much that the young people are ignorant on the subject but rather that they "know so much that ain't so." They should be made to understand that sexual relations are of the utmost consequence to the welfare of the individual, the family and the race, but that they are only for those who are sufficiently mature to bear and rear children and are married so that they can do so. Unless this information can be conveyed in a way that convinces the young people themselves, it might as well not be given at all. Merely to admonish them in abstract terms is of little or no value.

Provided the biology teacher of the high school has an appreciation of the possibilities of his subject, I strongly suggest that at least one course in this subject is taken in the high school career. Young people are usually safe when they are on familiar ground. It is possible in a biology class to discuss fundamental matters of sex in the most casual manner and in this manner to lay an impersonal foundation for a sound understanding of the subject. When home influences and parental instruction then supplement scientific instruction, little concern need be entertained concerning the welfare of youths and maids who have normal poise and self control.

Of much importance to the youth of this age is an appreciation of the fundamental reasons for the existence of a stable family life. Without the carefully integrated family, the human infant and child are placed at a serious disadvantage and may not be able to overcome the handicap. While it is perfectly possible for persons to live in a satisfactory manner without marrying, it is evident that marriage is fundamentally necessary to society as now constituted. In spite of the fact that many marriages go on the rocks, it is rather certain that men and women are normally better satisfied and happier in that relation than out of it. Marriage should then be held before young people as a probable goal, and careful thought and planning may well be given to the matter. All too frequently boys and girls break out into a scarlet rash as soon as marriage is mentioned. Giggling and protesting, they disclaim any such intentions. Such behavior is a discredit to the parents rather than to the boy or the girl, for it shows clearly that such matters have not been frankly discussed.

The sanctity of marriage may well be taught and illustrated at any age of development, but it is important that it is increasingly emphasized as the child approaches the age when he or she may be expected to enter into such a contract. Unfortunately there are many persons who cannot understand the reasons why marriage should be more than a mere civil contract. I shall not discuss this matter at this time but merely suggest that the reason why marriage is more than a civil contract is to be found in the fact that children will probably result from such a union. Conventional marriage is the foundation on which is built the home, and the home is the basis of every one of the other social institutions—the school, the church, the government, industry and social relations. Without the home it is hard to see how mankind could get along in any sort of acceptable manner. A community of good homes invariably has good schools, influential churches, thrifty, industrious, intelligent, educated people and an acceptable government. A community of bad homes is hopelessly in the mire. These are facts that can be made plain to young people who will consciously or unconsciously adjust themselves accordingly. Happy marriages and healthy homes are not the products of accident, the writers of melodrama to the contrary. They are worked out by persons informed in matters pertaining to real human values.

Before criticizing the young people of today, it is well to consider the difficult position in which modern life places them. They develop sexually earlier than they would and should were it not for the omnipresent sex stimulation which they are constantly receiving. At an early age they see moving pictures of the most sophisticated sort; they pick up risqué books or hear such books discussed; they see all sorts of irregularities. At an early age they have been more or less intimately introduced to the urges and passions, but usually they are not permitted to marry until they are well along in their twenties.

In contrast to this situation is that of our parents, who were not let out into society until they were 16 or 17, and were solidly married, frequently, at the age of 18 or 19. In the early months of the period of courtship they were so awkward and green that they could hardly get into serious mischief; and by the time they were well out of that period, marriage was usually consummated. If we are going to bring children up in such a way as to avoid the awkward and green stage, we are under obligation to help them take care of the passions which are aroused but may not be gratified. I am more than a little inclined to think that the awkwardness of the adolescent boy or girl is a protective device of no mean consequence. It is likely that those children who come through this period slowly and naturally will be better adjusted

The girl usually passes through a "boy-struck" period. She giggles and makes herself conspicuous.

than those who are hurried through by socially ambitious parents.

It is for this reason that athletics are so important for boys and girls of this age. Athletics are held by many to be for the purpose of developing the physique. I believe that they are of much more consequence when they develop character. As a matter of fact, strenuous athletics at this time in life may actually injure the body, and they frequently do so when they are not properly controlled. Play and recreation, rather than high-powered competitive sports, are needed. The boy who plays tennis, basketball or baseball, or engages in any of the many other wholesome sports is not in much danger of giving too much thought to the girls. He, indeed, often has a fine scorn for the members of the so-called weaker sex because they cannot equal him in the manly sports. He plays until he is tired enough to go promptly to sleep when he goes to bed. He has something to think about; he has training rules to keep; he learns to give and take.

Girls are usually somewhat less interested in athletics, though there are many exceptions. The reaction of girls toward athletics is essentially like that of boys, but there are certain differences which should not be entirely forgotten. There are, for example, the limitations imposed by the regular recurrence of the menstrual period. No one wishes to make invalids of girls, but one should insist that some consideration is given this matter. This point will be discussed later. The pelvis of the girl is broader and more loosely jointed than that of

the boy. This is a relation which is necessary, as the pelvis must be built in such a way as to sacrifice strength for the contingencies of future childbirth. Heavy or excessive muscular exercise can for this reason more seriously injure the girl than the boy. Furthermore, there is an adjustment of the blood supply that is of much consequence. Nature insists that the demands of the reproductive system shall come first. For this reason the blood supply of the pregnant or nursing woman is commandeered for the reproductive organs and the breasts. If a girl is allowed to develop herself too highly in athletic lines, she is able in not a few instances to train her muscles so that they will make such a drain on the blood supply as will cheat somewhat the reproductive organs. It is well known that rather poorly developed women often have beautiful babies, while it is also well known that women of the muscular type are often sterile and that their babies, when breast-fed, frequently are puny and poorly nourished. An analogy is seen in the fact that beef cattle give poor milk and little of it, while the bony Jersey and Guernsey cows give large amounts of rich milk. I strongly believe in athletics for girls, but their sports should be somewhat less strenuous and competitive. Girls do much better with the types of games that are mostly individual endeavor; boys need the highly cooperative games. This is in line with the probable needs in later life when the men will need as a rule to work with others while the housewife for the most part must do her work alone.

Every child of adolescent age should have a hobby. By this I do not mean that parents who read this should immediately hustle out and get one for each of the children, but that they should make the way easy for the development of any special interest that the child may have. Interested young people make collections of butterflies, beetles, plants, stamps, match-box covers, marbles, buttons, and a thousand and one other things. What a vast amount of mischief can be avoided by such means!

The exercises prescribed by the Scout Manual have been of incalculable value in keeping boys and girls in pursuits which permit them to come along without too much attention to the developing forces within them. Of two boys of my acquaintance one spent his spare time loafing on street corners, while the other was constantly looking for new plants for his herbarium, which already numbered several hundred specimens. It is not hard to guess which was developing best.

It may seem that I am getting off my text of sex education; on the contrary, I am in the heart of the subject. Just as government is best when it governs least, so is education best when it is least obvious. The parent who calls the child in from play in order to give him his weekly instruction in sex is entirely out of step. Sex is life. It is just plain wholesome living and doing; therefore the teaching of this subject must be casual and matter of fact except under certain conditions when it must be highly idealistic and romantic. The wise parent will know when to look the other way and likewise when to set up the sanctuary. The best that the adolescent can do is to grow and develop. When the new-found powers begin to assert themselves, they must be met with frankness and understanding, as a sacred trust and a hostage to the future.

The habit of masturbation is liable to be developed during this period. In a later chapter I shall discuss this matter in some detail. Here I shall merely say that the practice is certainly in bad taste and something of which no one can possibly be proud but that otherwise it is of little consequence unless the boy or girl worries about it or is degraded by it. The best that can be done is to become so busy with other things that it and the memory of it are forgotten. If masturbation caused only a small part of all the ailments of which it has been accused, the human race would be in a bad way, indeed. Forget it.

Boys are frequently alarmed by the occurrence of seminal emissions or discharges of prostatic and seminal secretions while asleep. Mothers finding the stained sheets are sometimes greatly alarmed. It means nothing except that the boy is developing properly and is not indulging in masturbation or sexual relations. It is sometimes said that sexual relations are necessary after a certain age is reached, else the organs of the male will atrophy from disuse. Nonsense! Nature is not so stupid as to permit such a misfortune to that system which she so highly cherishes. She has provided the reproductive organs with a safety valve in the form of these seminal emissions. They are perfectly normal and are indeed an accurate indication of proper and safe development. In the same category are the voluptuous dreams which boys and occasionally girls may experience. Think nothing of them.

Before she is 12 years old, the girl should have the phenomenon of menstruation explained to her. Otherwise she is likely to be frightened by it and may be ashamed to say anything about it if she is not accustomed to confide in her mother. Formerly it was the custom of careful mothers to put their daughters to bed for a day or two at each menstrual period and to interdict all activity and bathing during this time. The girl was taught that she was sick and that she might expect for the next thirty years to be an invalid once a month and then to pass through a "change of life" that would probably kill her. In all too many instances the girl and woman lived up to the program expected of her. She was taught to be an invalid. Recently *(Continued on page 1143)*

A Century of Progress in Medicine

By

THOMAS G. HULL

Since the Chicago World's Fair of 1893, the average height of women has increased 3.3 inches and average weight, 26 pounds. (American Medical Association Exhibit, A Century of Progress Exposition.)

MEDICINE has advanced further during the last century than in the twenty centuries preceding. Numerous factors are concerned with this progress, such as contributions made by various branches of basic science, the improvements in medical education and a better appreciation on the part of the public in using the facilities at hand.

Numerous discoveries in the field of medicine have been reported constantly during the last hundred years, while advances in the biologic, chemical and physical sciences have brought to the hand of the physician invaluable aids in the promotion of his art.

A complete medical chronology of the last century would be a volume in itself. Following are a few of the outstanding discoveries:

In the field of physiology, Beaumont was the first investigator to study digestion and the movements of the stomach in the human body. In 1833 he published his famous observations made on Alexis St. Martin, the patient who had suffered from a gunshot wound in such a way that the stomach could be observed from the outside. Most of the present knowledge of digestion dates from this time.

Morton in 1846 introduced ether anesthesia to the medical profession. Long had operated with it four years previously but had made no report of his discovery. Chloroform anesthesia was used by Simpson in Great Britain in 1847. One effect of these discoveries was to increase the popularity of surgical procedures with the public. More important, however, was the fact that the surgeon could take his time with an operation and thus do better work, where previously he had to rush through at lightning speed because of the writhings of the patient.

In 1861, Pasteur published his first article on bacteria, thus laying the foundation for the "germ theory" of disease. Numerous other investigators later made valuable contributions; prominent among them was Robert Koch of Germany. The discovery of bacteria has had a decided effect on medicine. Not only can infections of wounds now be prevented, but the whole field of vaccine and serum therapy for the control of contagion has resulted.

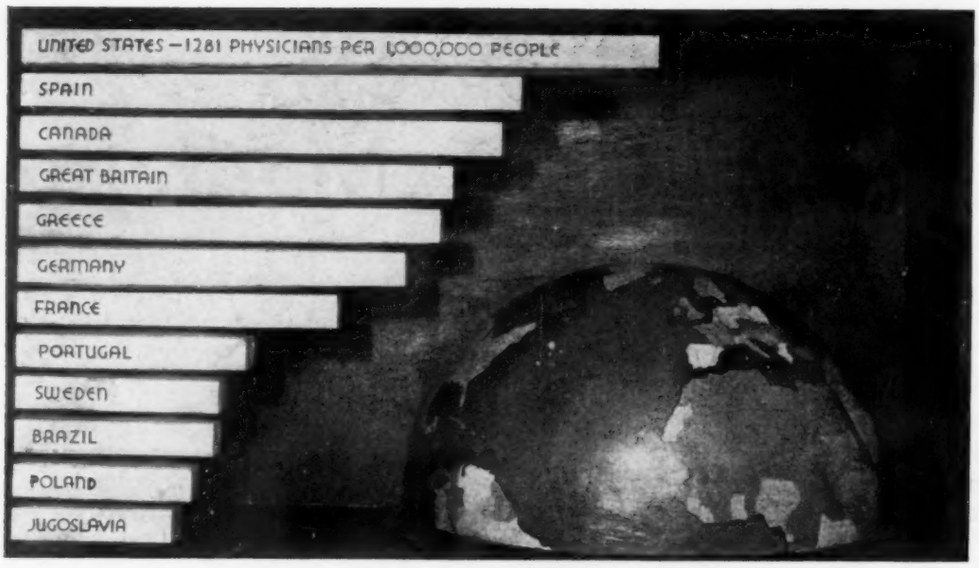
In 1867, Lister introduced aseptic surgery; that is, surgery in which all germs are kept out. Previous to this time, infection of a wound with bacteria was so common that "laudable pus" was expected; such pus was regarded as indicative of less danger than other varieties. In cases of necessary amputation of a leg or an arm, a red-hot iron was sometimes used to sear the flesh. With the adoption of the scrupulous cleanliness recommended by Lister, infections following surgical operations largely ceased.

Roentgen in 1895 discovered the x-rays, the mysterious emanation which has made it possible to see into the human body. Not only do broken bones become visible, but improperly functioning organs can be watched for defects. The x-rays, or roentgen rays, as they are sometimes called, are also used for the treatment of disease.

In the realm of insect transmission of disease, Theobald Smith, working with Kilborne in 1893, discovered that Texas fever in cattle could be transmitted by the cattle tick. The knowledge that insects could spread disease from animal to man, or from man to man, resulted in the control of malaria, yellow fever and numerous other diseases resulting from the bites of insects.

Radium, one of the most precious substances in the world, was discovered in 1898 by the Curies. This powerful material, so destructive to life when improperly handled, is useful in treating certain types of cancer.

Ehrlich in 1909 discovered arsphenamine, a chemical compound which is a specific cure for



Licensed physicians per million population:

United States	1,281
Spain	1,000
Canada	960
Great Britain	937
Greece	857
Germany	765
France	626
Portugal	429
Sweden	383
Brazil	375
Poland	331
Jugoslavia	289

syphilis. Thus chemotherapy, as the treatment of disease by chemicals is called, has been brought to the hand of the physician in the battle against disease.

Banting in 1922 discovered insulin, a specific remedy for diabetes. This is an example of organotherapy, the treatment of disease by the extracts of certain animal tissues, which has received much attention recently.

Physicians—Then and Now

The physician of a century ago practiced medicine under trying circumstances. His method of transportation was the horse; his "kit" was the saddle bag containing not only his instruments but most of his supply of drugs; his "rounds" took him from home for long hours in all kinds of weather. Methods of communication were slow, and often he was hailed as he went by a house to see a patient who had been waiting long hours for him to come that way.

By contrast, the facilities today are striking. The physician many miles away may be called on the telephone and quickly reach the bedside of his patient. He may bring numerous modern aids with him or transport the patient by automobile over smooth roads to the hospital where there are available all the latest devices of science and the ablest services of skilled assistants. The physician of former days deserves admiration for what he accomplished with the means at his hand.

There is no record of the number of physicians in the United States a century ago, for at that time few states of the Union had any licensing laws or other restrictions on any person who desired to pose as a "doctor." Today, however, there are more than 150,000 regularly licensed doctors of medicine in the country, or 1,281 per million of population. This exceeds the number in any other country in the world.

The overcrowding of the medical profession in the United States is especially felt in the larger cities, as in Chicago, with 1,938 physicians per million of population, and Boston, with 3,268 physicians per million of population.

During the year 1932 more than 15 million persons received medical care in hospitals in the United States; a patient was received every four seconds, day and night, throughout the year. This is in striking contrast to the conditions a century ago when the hospital was too often a place to which a person went to die and which was little used except by the incurably ill, the demented and the pauper. At that time there were no trained nurses, no asepsis, no anesthesia and no laboratory in the hospital. Medical care was not as good as that which a person could obtain in his own house, and the physician, therefore, did not use the hospital to a great extent in his medical practice.

Patient's Share in Progress of Medical Care

The patient has a certain amount of responsibility in the kind of medical care he receives. Self diagnosis of medical ills, coupled with self medication of those ills, usually results in poor medical care. Proper diagnosis of one's own ills often is difficult, even by an expert who may find himself sick. For the layman it is always advisable to call in a physician in time of illness. Self medication has several disadvantages: Wrong treatment may be instituted which will aggravate the condition; the treatment may be harmless in itself but may be continued so long before proper treatment is begun that much irreparable damage has been caused by the delay; the expense will be out of all proportion to what proper treatment would have cost. Wrong treatment may be actually fatal; a famous physician once warned a patient who persisted in the habit of treating himself with the help of a "doctor book," that some day he might die of a misprint!

On the other hand a periodic health examination is a requisite of good medical care because it gives the physician an opportunity to recognize and combat many diseases in their beginnings. The organic diseases of middle life do not spring up overnight but develop slowly

over a long period of time before they reach their critical stages. Many of them could be prevented or postponed if they were recognized in time. For this reason, therefore, health examinations should begin before the child is born and continue at regular intervals through life.

Since the last World's Fair in Chicago, forty years ago, the average height and weight of the population has increased considerably. Using the figures obtained in women's colleges, an increase in average height of 3.3 inches and in average weight of 26 pounds is apparent since 1893. Gathered from numerous sources, the figures for men indicate the same trend of increasing stature.

Similarly during the last half century, the average length of life has increased seventeen years, twice the increase of the previous two centuries. In the seventeenth century, when the first American colonies were founded, the average length of life was 33 years; in the eighteenth century, when the United States was founded, it was 39 years; in the nineteenth century in New York City about 1880, it was 41 years, and in the twentieth century, figures compiled for 1930 show 58 years as the average length of life. The increase in the average length of life does not mean that the span of life has increased, because in former times people lived to be as old as they do now; but not as many lived long then as now. While much of the increase in average has been due to a rapidly declining infant death rate, the death rates at other ages have also shown improvement.

These results form a practical demonstration that better medical care is rendered by the physician of today than was rendered by his predecessors and that there is a greater appreciation on the part of the public in applying the medical knowledge that is available.

No Short Cuts to Modern Medical Training

The medical student of today has a long exhaustive course of training for which there are no short cuts.

College work of at least two years and often four years is a preliminary requirement. Here the student gets his necessary cultural training and such fundamental sciences as physics, chemistry, botany and zoology.

Medical school courses last for four years. Training is given in the basic sciences such as bacteriology, pathology, physiology, histology and anatomy. These are followed by numerous clinical subjects, such as gastro-enterology, urology, dermatology, ophthalmology, laryngology, neurology, obstetrics, internal medicine, surgery and others.

Intern training in a recognized hospital is a continuation of medical instruction. Some medical schools do not award the degree of Doctor of Medicine until this is completed. A minimum of one year must be taken, and many students extend it to two or three years before the final examination is taken for a state license to practice medicine.

All this contrasts sharply with conditions a century ago when the usual mode of medical education was by the apprentice method. The student placed himself under the guidance of a practicing physician and received good or poor instruction according to the capabilities and thoroughness of the preceptor. The medical schools which then existed gave a course of instruction of two years or less. There were no hospital internships and no state licensing boards. In fact there was no bar to a person without medical knowledge posing as a physician.

Modern Medical School Has Rigid Requirements

The progress of medical knowledge has been so great in the last hundred years that at present the education of any person who intends to heal the sick, whether in the general practice of medicine or in a specialty, requires from seven to ten years after graduation from high school. Such a course is expensive as well as arduous.

In 1833 the medical schools of the country numbered 13; nearly all were small institutions, but some of them gave excellent instruction for those times. During the passing years, with the advance in medical knowledge, the number of medical schools increased rapidly. By 1904 they totaled 166. The standard of many of them was so low, however, that they were a disgrace to the country. Students were accepted with grammar school education, were given a six months' course of lectures and were awarded the degree of Doctor of Medicine. A few schools did not even require the lecture course but awarded the "degree" to any and all who were willing to pay the required fee. There seemed to be no legal means of combating this situation.

In 1904 a campaign to improve instruction in all medical schools was instituted by the medical profession itself through the American Medical Association. Some medical schools in which sufficient finances were lacking were persuaded to close, while others combined resources, making one strong school out of two or more weak ones. The requirements in all schools were made much more rigid through this purging from within the profession. Those schools which refused to cooperate were ignored, and most of them eventually ceased to exist. The few that remain can offer their graduates an opportunity to practice medicine in only two states in the country.

At present there are eighty-seven "recognized" medical schools in the United States all in the class A group, all giving instruction equal to any medical school in the world.

The question of health requires a definite answer. When a person loses his health, he

seeks medical advice. The wise person seeks medical advice while he is still healthy, and he usually finds his family physician only too glad to answer his questions and to procure the desired pamphlets for reading or study. The American Medical Association has published pamphlets for this purpose on a variety of topics for the layman which can be procured through the family physician. The Association also answers certain questions regarding health in HYGEIA, The Health Magazine, and is active in numerous other ways in promoting health education of the public, both directly and indirectly.

The American Medical Association Serves

The American Medical Association was established in 1847, primarily to improve the standard of medical education. Few persons stop to realize what a safeguard such an organization is to the public, for it means in the first place organized opposition to the quack and the charlatan. In 1906 the Propaganda Department, now the Bureau of Investigation, was started to devote special attention to this particular problem. The Council on Health and Public Instruction, now the Bureau of Health and Public Instruction, which was established in 1911, makes available numerous publications on health for the layman, besides carrying on speaking engagements and regular radio talks. HYGEIA, The Health Magazine, is written especially for the public. The Council on Pharmacy and Chemistry, the Council on Physical Therapy and the Committee on Foods all wage a ceaseless campaign for truthfulness in advertising. The Bureau of Exhibits prepares material for display at expositions, fairs, meetings of women's clubs, parents and teachers, and the like.

The Association also serves the public indirectly in numerous other ways, especially by increasing and improving the caliber of medical knowledge of the physician, through the publication of scientific journals and books, by loan library service and the answers to scientific questions. In order that the Association may keep abreast of the times, it maintains a complete chemical laboratory. Special departments are devoted to legal matters, to economic subjects and to medical education.

The American Medical Association is organized on a democratic basis. There are more than 2,000 component county medical societies in the country which form the basis of the organized structure. Membership in the county society automatically conveys membership in the state association and in the American Medical Association. The state association functions through delegates elected by the various county societies; each state association, in turn, elects delegates which, with delegates from the United States Army, the Navy, the Public Health Service and the fifteen sections of the Scientific Assembly, form the House of Delegates of the American Medical Association. This ruling body appoints the members of the Board of Trustees, which maintains the activities of the Association throughout the interim between annual sessions.

The headquarters of the American Medical Association with its numerous councils, bureaus and business departments, carries on its service to the public either directly from headquarters in Chicago or indirectly through state and county organizations and individual members. Such activities include the exposing of quacks and charlatans, campaigns for honesty in advertising, and education of the public in health matters through literature, lectures, radio talks and exhibits.

For Physician and for Layman

Following is a chronological table indicating the scope of activities undertaken by the American Medical Association:

The American Medical Association was organized in 1847.

In 1873 the Judicial Council of the Association was first organized.

In 1883 the American Medical Association established *The Journal* which has grown in these fifty years to an acknowledged position as the leading medical journal of the world.

In 1899 the American Medical Association established its Scientific Exhibit.

In 1904 the Council on Medical Education and Hospitals was established. This council conducts a clearing house for information regarding medical education, inspects and classifies medical colleges and hospitals and publishes annual statistics on these subjects.

In 1905 the Council on Pharmacy and Chemistry was organized to investigate and report on medicines used by physicians. This council has published numerous reports in *The Journal* and has published annually since 1909 a volume of reports on its work as well as the book "New and Nonofficial Remedies" which has been an annual publication since 1908. "New and Nonofficial Remedies" is supplementary to the official listings, namely the "Epitome of the U. S. Pharmacopeia and the National Formulary"; it affords a means of evaluating new drugs between revisions of the official listings. The Council on Pharmacy and Chemistry has also cooperated in numerous other publications having to do with chemical therapy.

The Bureau of Investigation was established in 1906 to gather, publish and disseminate information on the nostrum evil, quackery and allied subjects. This bureau, in cooperation with official governmental agencies, has relentlessly exposed fads, frauds and quackery, not only outside the medical profession but, when occasion demanded, within the profession. It has published numerous booklets describing the nostrum evil, quackery *(Continued on page 1144)*

Doorstep Babies

By

ILSE L. CALLMAN

A THIN, staccato wail merges with the night din—a din of whirring motors, honking horns, rumbling street cars, voices and laughter. It merges with this din of the night that is Chicago's and then rises above it, like the cry in the wilderness, to become the most individual and soul-piercing sound in the world.

Pat Cronin, traveling his policeman's beat in the chilly night and anticipating the home comforts which will be his in another hour, hears the cry. His practiced ear readily leads him to it, for he knows his beat as a school boy knows the contents of his pockets. Down an alleyway he goes, eyes and ears alert, until he reaches a sheltered recess where bottles of milk will be left early in the morning. A strange bundle now occupies the space, and from it comes the wail—thin, high, protesting. "Another one," sighs Pat as he takes the weeping bundle and calls the patrol wagon.

A little doorstep baby now has her first ride, a ride to St. Vincent's orphanage, Chicago's official foundling home, whose sheltering arms in the past fifty-two years have cared for and helped form the destinies of more than 50,000 infants, left by helpless mothers and found on doorsteps, in churches and belfries, garages, hotel rooms, parks—anywhere.

"Had the baby been in a serious condition when found," it is explained, "she would have been rushed for emergency treatment to the nearest hospital until she could be transferred here. The first thought is always for the welfare of the child."

The little doorstep baby has now stopped her crying. She has been fed and bathed. Fresh little garments and a warm soft nightie soothe her tiny body; and tucked away in a snowy crib in the observation or sequestration quarters, she sinks into a relaxed, refreshing slumber.

When next she wakes, she will not be just a nameless baby. She will be Patricia, named after the policeman who brought her in; and a well ordered competent machinery will have been set in motion for her. She will have been scheduled for various tests, Wassermann, Schick and others, by the staff pediatricians. And not until she has satisfactorily passed these tests will she be permitted to join the rows of creamy cribs in the sunny, well aired nurseries. One of the nurses keeps a record book for her with detailed daily charts of her feedings, her weight and other pertinent data. This chart is checked by the staff physicians, who prescribe corrective diet, sunlight lamp treatments, and whatever else Patricia may need to develop her into a healthy, normal child. Both a house dietitian and a laboratory technician are also at her service.

And while these things are being done for Patricia, a city investigator searches for her mother and her father. "A hopeless job" is one's first conclusion, having in mind the ease with which one may lose oneself in the fifth largest city of the world. But the competent machinery which has been put in motion for Patricia's welfare readily extends itself to the task of establishing her identity.

Patricia's mother is found. The tightly woven network of city, county and state records available gives her little chance to evade the trained investigators. The baby's clothing is traced, and the neighborhood where she was found is thoroughly checked, as are hospital records. The mother is young, uneducated, untrained and helpless. She is from a small town. The man in the case had promised to marry her. She believed him. When he disappeared and the birth of the child was imminent, there was nothing for her to do but leave home. Her father would have killed her, she averred, if he had known. She dared not confide in her friends. After the baby was born, she tried to find work, but there was none to be had. The last of her

Children requiring a special period of convalescence grow strong at Park Ridge Villa.

money was gone. She did not know how she could keep the baby any longer. So she deserted her, hoping some one would take care of her.

There is nothing new, nothing different about her story. It has been told at the orphanage over and over again, for almost 90 per cent of the mothers are found, while the fathers who are identified average only about 10 per cent. They usually escape to another state, change their names and lose themselves when they learn that the girl is pregnant; hence it becomes practically impossible to find them and make them assume their responsibility.

"And will Patricia's mother now take her when she is able?" I ask of Sister Camilla, the sympathetic, competent superintendent.

"Probably not," she replies. "She'll have a hard enough time reestablishing herself. And when she sees how the little girl thrives here and finds she cannot do as well for her, she will be satisfied to let us place her for adoption with some good family. She'll know it is for the best interests of the child."

There it was again—the best interests of the child. That is the focal point about which centers the thought of every department of this institution; it permeates the municipal social service departments, the infant care departments, and the maternity hospital which forms an important section of the building. And I, winging into the future of the little girl Patricia, murmur, "Too bad she's a girl. A boy can battle his way better."

"Not at all," comments Sister Camilla, smiling, and one can see her thoughts, too, winging into the future but bolstered by a rich experience of many years. "She doesn't look like much now. She's malnourished, and her little life has had a poor start. But wait till you see her a few months from now! She'll be as pretty and darling as any little baby needs to be to go to the heart of some nice couple wanting just such a child. We haven't had much trouble placing our little girls after we've built them up; but sometimes the boys are a problem."

"With the shrinkage in average earnings, is it not more difficult to find good homes for these babies?" I ask.

Sister Camilla agrees. "It is true the average family is not now able to adopt babies so readily as in normal times. But," she continues, valiantly confident, "people will always want babies, and they will come for our babies and give them good homes, even at great personal sacrifice. This is a current problem, but it is not a serious one."

It is difficult to believe that anything could be a serious problem for Sister Camilla. "Often," she says, with a twinkle in her eyes, "we just don't know where the money's coming from to pay the bills, but somehow we know it will come, and it always does."

Such is the faith and the spirit by which a ten-story building, occupying a half block, is now operating at top capacity with a 1932 daily average of 218 babies as against 192 in 1931; and from present indications there will be an even larger number for the current year. Its construction and equipment are on a par with those of the finest and most efficient infant and maternity hospitals.

There is practically no revenue aside from the moderate city fees. The unmarried expectant mother who goes there to have her baby is usually penniless as well as friendless, and only a few are in a position to pay anything at all.

Nothing to do but grow, be healthy and happy.

Therefore St. Vincent's depends on the gifts and bounty of its many supporters, who are of every denomination, for the institution houses all who need its special services, regardless of race, color or creed.

The new building, completed in 1931, marked the semicentennial of a small beginning when, in 1881, four Sisters of St. Vincent de Paul undertook the care of Chicago's unwanted babies. Close to its present location they began their first six months of arduous service, caring for forty infants and children in sadly inadequate quarters. At the end of that time, they moved into larger quarters turned over to them by John Carroll, a generous and staunch supporter of this work. They needed the room, for already they found themselves with a maternity hospital, too, principally for unfortunate women who had nowhere else to go. And after several years, they moved again, into still larger quarters, on part of the site of the present building.

The old policemen, who have been bringing in infants to St. Vincent's for years, claim they don't like it. They say they miss the local color of the old days, provided by row on row of infants' breech-cloths drying in the breeze, by which they used to "spot" the building. "And," they protest, "you can't tell it's for babies." So efficient is the modern plant that the laundry facilities now wash, sterilize and dry more than 3,000 of these cloths a day.

The entire building is flooded with daylight, and the ample nurseries and play rooms are beautifully equipped. There are decorative friezes of colored tiles bearing the nursery rhyme characters children love. Each floor is surrounded by balconies, some of them enclosed in special window glass for transmitting short wavelength ultraviolet rays to give the babies the full benefits of fresh air and sunshine. On the roof are a solarium, a sandpile, a wading pool and other play provisions for warm weather—a veritable children's Utopia.

Giving babies constant medical attention is not repair work; it is developmental work.

From the time they begin to walk, the older babies are supervised by a graduate preschool teacher to establish a sense of wholesome and constructive play and fun as well as good physical habits.

For those babies requiring a special period of convalescence, there is St. Vincent's Park Ridge Villa. Here as many as fifty can be accommodated, and the spacious grounds with their lovely old trees and beautiful lawns are dotted with groups of little children growing healthy and strong.

The accomplishment of St. Vincent's has been almost beyond belief. A yearly average of 1,000 infants and children up to 3 years of age has been cared for during the last fifty-two years. From 30 to 50 per cent of these infants have been adopted into private families after remaining at St. Vincent's for varying periods, ranging from a few months to three years. Before being permitted to adopt the child, the foster-parents were thoroughly investigated.

So carefully, in fact, are the character and environment of prospective foster-parents checked, that of all the children adopted, there has not been a single case of delinquency in more than seventeen years!

A baby a few months old was found deserted in a room of one of our large hotels. He was taken to St. Vincent's, but attempts to find the mother were unsuccessful. The infant was exceptionally pretty and lovable, and the newspapers gave the case much publicity. The baby's pictures were a daily feature with headline appeals to the mother. After several weeks she came for her baby; but the court, after a thorough investigation, decided she

Playtime satisfies the urge for activity.

was not a fit person to have her child and ordered him kept at St. Vincent's. This baby has since been adopted into a home where the environment will assure him care and love.

Sister Camilla says in her quiet, kindly way, "These babies beautifully demonstrate the law of compensation. Their life stream is so strong that even when they have been exposed to unbelievable conditions, they seem to survive. They are deprived of their natural love, and a supernatural love takes its place. Unusual attributes often offset their loss of rightful home and name. They become musicians, artists, professors, teachers, homemakers. Often they are leaders in their field.

"And how grateful they are for the love of those who adopt them! Many foster-mothers have told me their adopted children show them more love and devotion than their own children do. They bring sunshine and joy into the home. One woman adopted five of our babies, all from different mothers. She is giving them a splendid bringing-up.

"Our babies go into the homes of bankers, lawyers, executives and others. They marry into good families. A mother came back to visit who had adopted one of our babies more than twenty years ago. She herself had been given out from here, and she wanted to give to another little foundling the same chance that had been given her. She brought this child, now a lovely young woman with her to help with our babies because she had never forgotten what she had received here. That young daughter is now one of the leading factors in a large organization which helps not only our babies but those of other institutions.

"A remarkable thing is that these babies actually acquire the looks and characteristics of those adopting them. A little boy, taken into the home of a brilliant man, was so bright that every one said, 'He's certainly like his dad!' A railroad magnate who had adopted two of our children once gave a big dinner party, and several of the guests declared of the elder boy, 'Say, Al, that boy's the image of you. You could never deny him!'

"It often happens that after adopting one child, the foster-parents come back for another. Many of these children go into wealthy homes, some even where they have the advantages of any millionaire's child."

"Perhaps," it is suggested, "when people become better educated, there will be a change of heart toward the unwed mother and her baby, and she will be able to take him back with her and raise him."

Sister Camilla shakes her head. "I fear not. The married woman is the greatest obstacle to such a solution of the problem. She will never countenance recognition of a situation which might jeopardize her own rights and security. The only solution, as I see it, is to have these babies adopted into good families. They are given a certificate of good health. The remainder of their history is kept a confidential record here. It is not available to any one, not even to the adopting parents. The only time it is referred to is when some one who was given out from here requires certification of his birth for passport or other such purposes. For instance, recently a young man came back here to get the required data to permit him to qualify for his admittance to West Point.

"The doorstep baby," says Sister Camilla, "need now be an object of pity for only a little while. With the wonderful organization and equipment at his disposal here until legally adopted, he has a good chance for a happy childhood and a fine adulthood. He has the benefit of pediatric attention while here, generously contributed by reputable specialists, often not available in the home. Yes, the baby will always be taken care of, for who can resist the appeal of his little reaching arms?"

The head pediatrician is, like most good physicians, an idealist at heart. With a background of many years' experience, he has brought a program of infant care to St. Vincent's which assures each and every baby there the most scientific and progressive treatment.

"I am interested in men and women," he declares, "enormously interested in them. And in order that men and women may be self respecting and of value in the scheme of things, we must start them right as babies. And that is why I am interested in babies. Not because they are babies but because of what we may be able to make of them. You see, pediatrics is the only department of medicine which is not repair work; it is entirely developmental work. Fine things are being done for these little ones. They're a fine lot of babies. They'll make fine men and women."

After-Care of Infantile Paralysis

By ARTHUR KRIDA

INFANTILE paralysis is an infectious disease, the poison of which affects the spinal marrow. The spinal marrow or cord is made up of nerve cells and nerve tracts. These may be compared to stations and wires. Wires pass from the brain to stations in the cord and from these stations to all the structures of the body. Many of these cell stations in the spinal marrow control the muscles. The poison of infantile paralysis affects these particular cell stations; that is, those which control the muscles. When these cell stations are affected, the wires that pass from them to the muscles are interrupted, and paralysis of muscles is the result.

The poison of infantile paralysis may entirely destroy a greater or lesser number of these cell stations, and if this occurs, the muscles that were controlled by them will remain permanently paralyzed. Fortunately, however, the damage

Under a carefully supervised regimen, including limitation of activity, massage, heat, muscle training and restricted stimulation, the maximum recovery is to be anticipated.

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done to many of these cell stations is caused not by the poison of the disease but by the swelling and inflammation around the cell stations. The muscles controlled by such cell stations appear at first to be as completely paralyzed as are those whose cell stations have been killed. Yet these cell stations, which have been damaged merely by swelling and not by the poison of the disease, are capable of recovery. Their connections with the paralyzed muscles may, under suitable conditions, be reestablished; in this case, recovery from the paralysis will take place.

Effective After-Treatment Is Possible

It must therefore be evident that the extent of the paralysis that displays itself in the early weeks of the disease is always greater than that which is found at a later time. This fact makes possible an effective after-treatment of infantile paralysis. The discussion which follows may be divided into three propositions:

1. A certain amount of recovery is to be expected by natural processes. The degree of such unaided recovery is liable to be small.

2. A considerable additional amount of recovery from paralysis is to be expected under suitable conditions of treatment, but such recovery is limited to the muscles that are controlled by cell stations which have been damaged by swelling only and not by the poison of the disease.

3. A certain amount of paralysis may remain as a result of the death of the cell stations caused by the poison of the disease.

The muscles are the engines which propel the body about the world. They are attached to the bony framework of the body. This bony framework is broken up into numerous segments by the interposition of joints. The orderly contraction of the muscles produces the orderly and coordinated movements at these joints which allows one to work for one's maintenance, to play for relaxation and pleasure, and to cultivate grace and beauty in artistic endeavor. The victim of a muscular paralysis is, therefore, to a greater or lesser extent, a cripple.

The orthopedic surgeon is concerned with restoring function to these paralyzed muscles, with preventing and correcting deformity, and, when paralysis is found to be permanent, to so substituting the function of such paralyzed muscles by surgical operations as to assure the greatest functional capacity to the crippled member.

The after-care of the victims of infantile paralysis may properly be said to begin with the second or the third day of the disease. A trained orthopedic surgeon should be delegated to take charge of the paralytic part of the disease in conjunction with the medical attendant.

The orthopedic treatment in the early weeks of the disease consists entirely in splinting the paralyzed limbs in order to minimize pain and to prevent deformity. The kind of splint used is unimportant compared to the method of using it. Splints made of plaster of Paris are on the whole the most adaptable and the most satisfactory.

In New York City, patients with infantile paralysis are quarantined for three weeks at the Willard Parker Hospital. A trained orthopedic surgeon applies suitable plaster of Paris splints at an early time. No patient leaves that hospital, to be sent to any other institution for after-care, with any trace of deformity.

It may seem that too much stress has been laid on the occurrence of deformity, but this monster sneaks up like a thief in the night, and accordingly constant vigilance is required.

Deformity is of two sorts; one type is due to shortening of muscles and ligaments, and the other to change in shape of the bones. Unfortunately, in childhood the two usually go together, since the diseased bones are so soft that they will change their shape in conformity with the stresses that are placed on them. The foot may become crooked, the knee may become misshapen, or the hip may be drawn up.

How does deformity take place? If a paralyzed child lies in bed without protection from the weight of the bed-clothes, or in any attitude he adopts, his limbs will become more or less deformed in the attitude determined by these factors. Being a rapidly growing animal, he will grow that way, and not only his tendons and his ligaments but his bones as well will grow that way. What is almost as important, is the fact that those muscles which recover earliest will overpower the opposing weakened or paralyzed ones and thus add to the mischief.

It is evident that there is cause for concern here. It is the first duty of the orthopedic surgeon to prevent these otherwise inevitable deformities.

The next task with which the orthopedic surgeon is concerned is the restoration of muscular power. It must be recalled that this is limited by the amount of actual cell station death which has taken place in the spinal marrow. The only muscles that may be reclaimed are those whose cell stations in the spinal cord have been damaged by pressure and not those which have been killed by the poison of infantile paralysis.

Weakened Muscles Must Not Be Overworked

The methods employed for the purpose of restoring activity to paralyzed muscles are various. A primary consideration is this: A weakened or recovering muscle should never be required to do more than it is capable of performing. This sometimes necessitates nice discrimination. Such discrimination is usually not available from nonmedical sources, such as masseurs and physical therapists, except under strict supervision and control.

The methods, in short, are these: (1) protection from overuse by braces and limitation of activity; (2) massage, to stimulate the blood supply of the paralyzed part; (3) heat, for the same purpose; (4) electric stimulation with the same end in mind, but greatly overrated; (5) muscle training which consists of the gradually accumulating use of the recovering muscle, and (6) hot-water swimming pools which allow the weakened and recovering muscles to function under the most favorable conditions.

With such a regimen carried out under suitable direction, the maximum recovery is to be anticipated.

What May Be Done for the "Terminal Cripple"

What remains of the third proposition with regard to the possibilities of after-care in infantile paralysis? I am speaking of the stage after that in which these other measures have been faithfully carried out, or of that terminal stage of deformity and paralysis in which such measures were either unavailable or ineptly applied. I am aware of the fact that what might be called the "terminal cripple" has in recent years been the subject of much discussion.

Those who had the privilege of seeing a few years ago "The Miracle," that great medieval play produced by Max Reinhardt, will probably never forget the sad plight of the crippled and deformed persons who either hobbled or were carried onto the stage in the second act. The scene fairly represented the fate of the totally untreated cripple. I say totally untreated advisedly; historically, the period antedated the development of orthopedic surgery by several hundred years. In that age, and for a long time afterward, the cripple was a social and economic outcast.

Every one now, of course, knows that all this has been changed. It has been amply demonstrated that most of that obvious and ugly crippled state is preventable and curable. Since the demonstration of these facts has gradually impressed itself on the public consciousness, the cripple has become the object of intelligent solicitude to many socially minded and philanthropic organizations, including in more recent years state and national governments.

What may be done about the "terminal cripple?" Much can be done by orthopedic surgical operations. His deformities may be corrected; live muscles may be transplanted to take the place of dead ones. He may be taught to utilize to the last degree those purely mechanical powers which are left to him. Fortunately for all who are concerned with the sufferer from infantile paralysis, his brain is in no way affected in its functions except in a favorable manner, as he learns to surmount the purely physical handicaps with which he has to contend.

Treatment Is Available to All

In the United States there is at the present time no excuse except ignorance or neglect for a crippled child to fail to secure perfectly adequate treatment administered by orthopedic surgeons, who will give him the benefit of their skill and training; for every state in the Union has set up machinery whereby such treatment is made available to those patients who are unable to pay for private care.

Hot-water swimming pools allow the weakened and recovering muscles to function under the most favorable conditions.

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Alice in Mother Goose Land

A Musical Play by the 7-B and 7-A Music Classes of Lincoln Junior High School of Wyandotte, Mich.

PROLOGUE

Of Alice in Wonderland you all have heard
And how she grew big and then small
And how foolishly she tried to swim
Her pool of tears in the hall.

It isn't every little girl that gets a chance to play
An exciting game of croquet with the Queen
Who said, "Off with her head" almost every single day
To the King who was very seldom seen.

Now Alice has adventures almost every other day
And she is always ready for a thrilling game to play.
When she went to Mother Goose Land on a very secret quest,
She discovered many other things—
but the play will tell the rest.

"Why, who are you?"

CAST OF CHARACTERS

Alice	Jill
Little Boy Blue	Cat and Fiddle
Mother Goose	Humpty Dumpty
Bo-Peep	Jack Spratt
Miss Muffet	Tommy Tucker
Jack Horner	Jack Be Nimble
Mary	Ten O'clock Scholar
Jack	Crooked Man

Wee Willie Winkie

Scene: *Mother Goose's Outdoor School. Semicircle of Mother Goose and her children. Chorus makes up the background representing flowers.*

Alice:
I never saw this path before.
I wonder where it goes.
There doesn't seem to be a door;
I'll just follow my nose.

Jill:
Come visit Mother Goose Land.
We know you'll think it grand.
The melodies will never die
While nurses sing and babies cry.

Alice:
Oh, I know you.
How do you do?
I'm Alice, all dressed in blue.

Children:
Alice? Alice from Wonderland?
And now you've come to our land?
Come join us in our fun.
Health rules, we learn every one.

Alice:
Why, who are you?
You look like Mother Goose, you do.

Mother Goose:
And so I am as you can see,
And to good health I give the key.

Alice:
What, do you teach health rules, too?
That's all that any one seems to do.
What good are health rules anyway?
To me they never seem to pay.

Mother Goose:
Oh, no, my child you are quite wrong,
As you will find out before long.
Why are you so sickly and pale?
Why are you as thin as a rail?

I will answer this for you
So you'll know just what to do.
You've read the rhyme of Little Bo-Peep
How carelessly she lost her sheep?
Now here she is to tell you why
She fell asleep and let them fly.

(Bo-Peep stands.) Chorus sings "Little Bo-Peep":

Little Bo-Peep has lost her sheep
And can't tell where to find them;

Leave them alone, and they'll come home,
Wagging their tails behind them.

BO-PEEP:

I'll tell you why I lost my sheep—
I was so tired I fell asleep!
I stayed up late the night before.
I will not do that any more.

ALICE:

I am not very tired;
I'm quite wide awake.

BO-PEEP:

But tomorrow you'll feel sick sleeping so late.
All tomorrow you'll be grouchy and cross,
For missing your sleep is such a great loss.

MOTHER GOOSE:

Little Boy Blue went to bed late;
When he got up his cows were away.
Now he is up so bright and early
And goes down to the meadow in such a great hurry.

Mother Goose looks for Boy Blue, who is asleep, while chorus sings "Little Boy Blue":

Little Boy Blue come blow your horn,
There's sheep in the meadow and cows in the corn.
Where is the boy that looks after the sheep?
He's under the haycock fast asleep.

MOTHER GOOSE:

And now you'll meet another friend
Who also has some faults to mend.

Chorus sings "Miss Muffet":

Little Miss Muffet sat on a tuffet
Eating some curds and whey.
There came a great spider and sat down beside her
And frightened Miss Muffet away.

MISS MUFFET:

I am Little Miss Muffet from over the bay
To tell of the spider who scared me away.
The spider did nothing to make me jump so
It's the coffee I drink for breakfast, you know.
I never was so nervous before;
Oh, not any coffee for me any more.

ALICE:

So that's why Mother says NO to me
Whenever I ask for coffee or tea.

Chorus Sings "Jack Horner":

Little Jack Horner sat in a corner
Eating a Christmas pie.
He put in his thumb
And pulled out a plum
And said, "What a good boy am I!"

MOTHER GOOSE:

Little Jack Horner sat in a corner—

JACK HORNER:

Eating my pie between meals.

MOTHER GOOSE:

'Twas a very sad sight to see him that night—

JACK HORNER:

With a pain from my head to my heels.

ALICE:

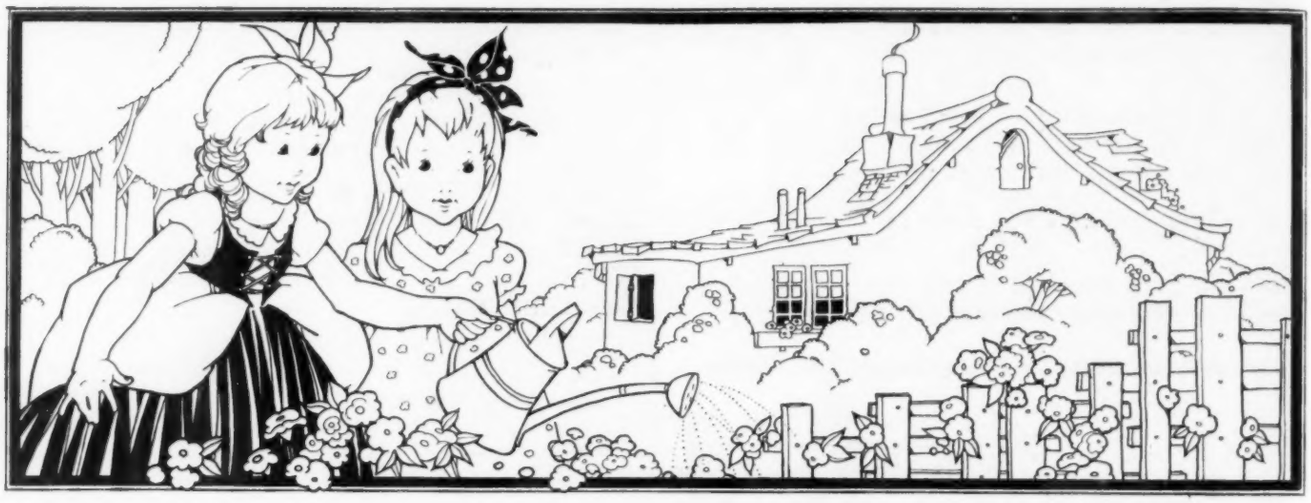
No wonder Mother looks me in the eye
Whenever I ask for a second piece of pie.

Chorus sings "Mary, Mary":

Mary, Mary, quite contrary,
How does your garden grow?
With silver bells and cockle shells,
And pretty maids all in a row.

MOTHER GOOSE:

Mary, Mary, quite contrary,
You play outdoors I know.



"With flowers so gay and sunshine each day."

How's your garden, how're your flowers?
With sunshine you should grow.

MARY:

If you want to know
I will tell you so
Why I grow so well.
Out in the sunshine I always go
And that makes you strong and healthy, you know,
With flowers so gay
And sunshine each day.

Chorus sings "Jack and Jill":

Jack and Jill went up the hill to fetch a pail of water.
Jack fell down and broke his crown,
And Jill came tumbling after.

JACK:

Little Jill went up the hill
To fetch a drink of water,
For she was told
It was pure and cold,
And would help keep the health rules taught her.

MOTHER GOOSE:

Jack and Jill went up the hill
To get a pail of water.
Drink plenty of that
And you'll grow fat
And that is all that matters.

Chorus sings "Hey Diddle":

Hey diddle diddle, the cat and the fiddle,
The cow jumped over the moon.
The little dog laughed to see such sport,
And the dish ran after the spoon.

ALICE:

There goes the cat and with him his fiddle.
To tell who he is, is a quite easy riddle;
For how would the cow have jumped over the moon
And how would the dish run away with the spoon
Except for the cat who played the fiddle
To the merry old tune of hey diddle diddle.

MOTHER GOOSE:

Hey diddle diddle, drink all your milk
For it will make your skin like silk
And make you strong and healthy
And then you will be very wealthy.

Chorus sings "Humpty Dumpty":

Humpty Dumpty sat on a wall.
Humpty Dumpty had a great fall.
All the king's horses and all the king's men
Couldn't put Humpty Dumpty together again.

JACK SPRATT:

Humpty Dumpty sat on a wall.
Humpty Dumpty had a great fall.
If Humpty Dumpty wasn't so fat,
He'd never have done a thing like that.

HUMPTY DUMPTY:

Jack Spratt could eat no fat,
A sad case I declare,
For every one should eat the foods
Included in his fare.

Chorus sings "Tommy Tucker":

Tommy Tucker, so they say,
Ate his supper, trolled a lay,
"Bread and butter," said his mother,
"Tommy Tucker shall have today."

ALICE:

Are you the boy they call Tommy Tucker,
Who, they say, ate his supper, trolled a lay?

TOMMY TUCKER:

Yes, bread and butter, said my mother,
Tommy Tucker shall have today.

MOTHER GOOSE:

Tommy Tucker sang for his supper.
Bread and butter have made him grow
So I advise it to all I know.

Chorus sings "Jack Be Nimble":

Jack be nimble, Jack be quick,
Jack jump over the candlestick.
Jack be nimble, Jack be quick,
Jack jump over the candlestick.

ALICE:

Jack was nimble, Jack was quick,
Jack jumped over the candlestick.

MOTHER GOOSE:
If you get exercise every day
You're sure to keep the blues away.

Chorus sings "Diller a Dollar":

A diller a dollar, a ten o'clock scholar,
What makes you come so soon?
You used to come at ten o'clock,
But now you come at noon.

SCHOLAR *(from off stage):*
I am so sleepy and I feel so weepy.

MARY:
What do you drink before going to bed?
Will you please tell me what you said?

SCHOLAR:
Coffee and pie, oh my, oh my, how good it does taste!

MARY:
Oh my, oh my, that's why you cry.
You are so thin, you look like a pin.

SCHOLAR:
I really don't think I look so bad.
Don't look at me; you make me sad.

MARY:
I drink milk now;
I get it from a brown Jersey cow.
I never drink coffee any more or eat pie,
That's something you should try.

MOTHER GOOSE:
A crooked man was he
Who never stood up, you see;
But when to Mother Goose Land he came,
He stood up like a flame.

CHILDREN:
There was a crooked man
Who had a crooked cat.
Stand straight,
Sit straight,
Or you'll be like that.

Chorus sings "Wee Willie Winkie":

Wee Willie Winkie runs through the town,
Up stairs and down stairs in his nightgown,
Tapping at the window, crying at the lock
Are the babies in their beds for it's now eight o'clock?

Are the babies in their beds for it's now eight o'clock?

MOTHER GOOSE:
Wee Willie Winkie comes running through the town,
Jumping, skipping and acting as a clown,
Making his nightly rounds.
All of a sudden the children he takes
Home to bed until the dawn breaks.
It's eight o'clock by the village chimes;
Off to bed for healthy bodies and clear minds.

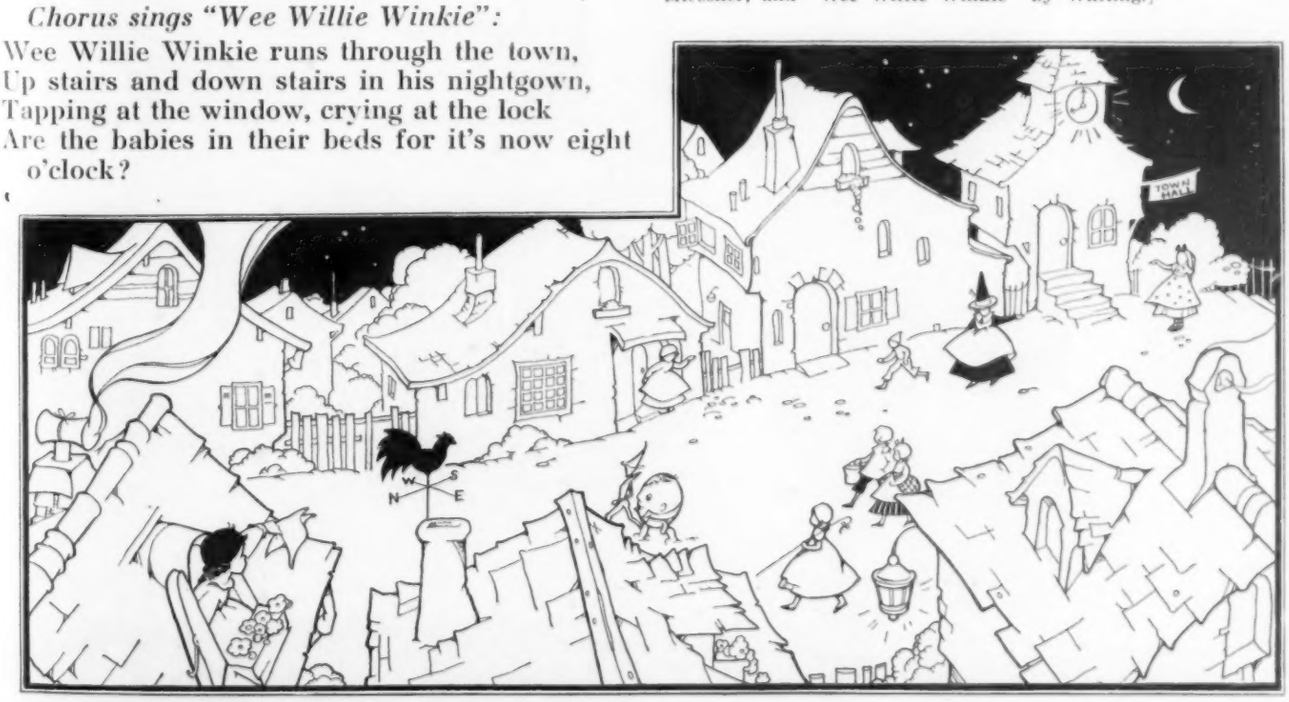
CHILDREN:
Here we go off to bed
For there's another day ahead.
We may not stay out late after play
For we, children in Mother Goose Land
Grow more healthy and strong each day.
To Mother Goose Land you have come.
We hope you've had a lot of fun.

ALICE:
Now, back I must go to Wonderland
To tell of the times I've had.
The Duchess I know will think it grand
And the Hatter no longer be mad.

And the Little White Rabbit I frightened so
Will dance about in glee
To think how healthy and happy, too,
He is going to be.

Now good-by I must say and be on my way
To spread my message of good cheer,
A message of health and happiness
To spread both far and near.

[NOTE.—The compositions used in connection with this play were as follows: "Little Bo Peep," "Little Jack Horner," "Hey Diddle Diddle" and "Humpty Dumpty" by Elliot; "Mary, Mary, Quite Contrary" and "Jack Be Nimble" by White; "Little Boy Blue" by Wier; "Miss Muffett" by McCullough; "Jack and Jill" by Foster; "Tommy Tucker" by Chadwick; "Diller a Dollar" by Miessner, and "Wee Willie Winkie" by Whiting.]



I Want to Know

A FIRST PHYSIOLOGY

By Oscar Reiss
and
Dorothy Walter Baruch

IV. What Happens When Your Heart Beats

WHEN you put your hand on your chest over your left nipple, you can feel a sort of lub-dub, lub-dub going on inside.

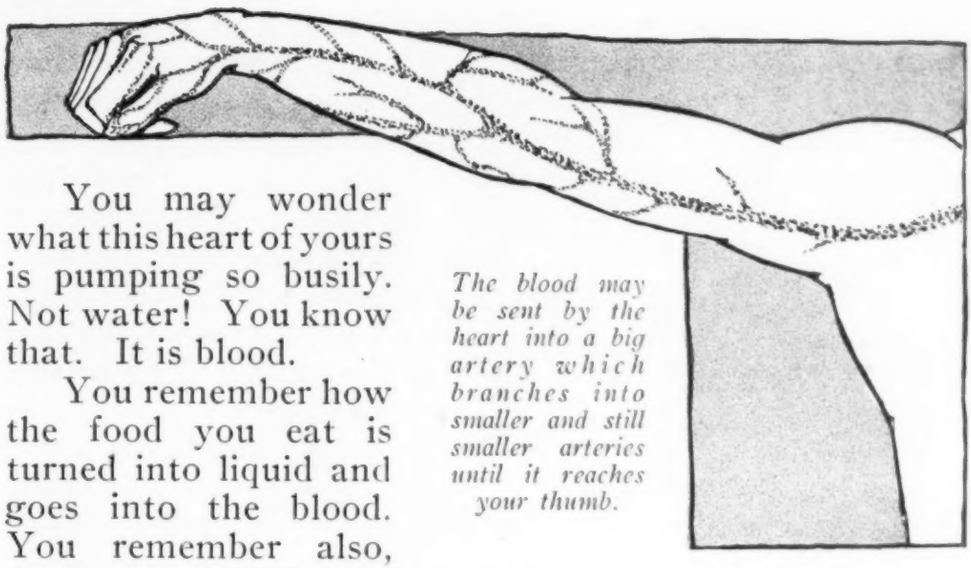
When you put your ear against some one else's chest and listen, you hear the same sort of lub-dub, lub-dub going on. You can try it with any one, and you will always hear that same gentle, steady sound.

When you put your ear against some one's chest and listen, you hear a sort of lub-dub, lub-dub going on inside.

One boy who listens, laughs and exclaims, "Oh, there's a man playing a drum inside there."

But of course, you know, that is not the case. You know that it is the beating of the heart you are hearing.

The heart is continuously pumping, pumping. And if you have ever seen a water pump chug-chugging away, you know what a steady, busy job pumping is.



The blood may be sent by the heart into a big artery which branches into smaller and still smaller arteries until it reaches your thumb.

You may wonder what this heart of yours is pumping so busily. Not water! You know that. It is blood.

You remember how the food you eat is turned into liquid and goes into the blood. You remember also, don't you, that in the blood it has to be carried to every part of the body? So naturally the blood itself must go to every part of the body. The pumping of the heart does this work.

Jerry said, "I bit my tongue, and blood came trickling out."

Jean said, "I pricked my finger, and it bled."

And John chimed in, "I stepped on a piece of stone once. It was sharp, and it cut my foot, and lots of blood came."

That was because the heart had pumped blood to each of these parts, just as it pumps blood to every other part of the body.

"But," questioned Jerry, "how does the blood get to the heart?"

It might run through a pipe. It might run through a hose. And that is practically what it does. It runs to the heart through soft hollow tubes called veins. And then it is pumped out from the heart again through other tubes called arteries.

This is somewhat the way it works: Suppose your heart is sending blood, for instance, to the thumb of your left hand. It pumps out blood, lub-dub, into the big artery tube leading toward your left chest and shoulder and arm. The blood runs in this big artery up to about your armpit. Then the artery branches off into a smaller

artery that carries the blood down along your arm. This smaller artery branches out again and again; a section of it leads to the inner tissues, and a section leads to the outer layers. Smaller and smaller branches go to each finger and also to your thumb. And there, tiny thin branches which are as fine as hairs lead to the sides and tip and top of the thumb. These tiny branches are called capillaries. They carry blood even under your thumb nail.

"And then where does the blood go?" asked Jerry.

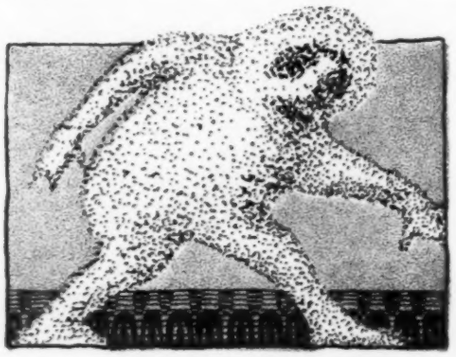
Jane looked serious. She examined her thumb, "It can't come out," she said. "There's no hole."

"Perhaps it gets lost in there," suggested John.

But no, it neither comes out nor gets lost. It goes back again to the heart! How? Why here again, there are branching tubes to carry it back. They are called the veins.

If you look at your wrist, with the palm of your hand turned up, you will see some little blue lines. Here you can see a portion of the veins that carry the blood back to your heart. Perhaps you can see them too in the palm of your hand and up along the inside of your elbow. The arteries that carry the blood away from the heart are in deeper. You cannot see them.

The blood in the arteries is fresh blood. It is bright, brilliant red. But when the body parts use up what they need from the blood to help them work, it is no longer fresh. It loses its bright red color. It is used blood, and it turns purplish and darker, and shows blue through the skin.

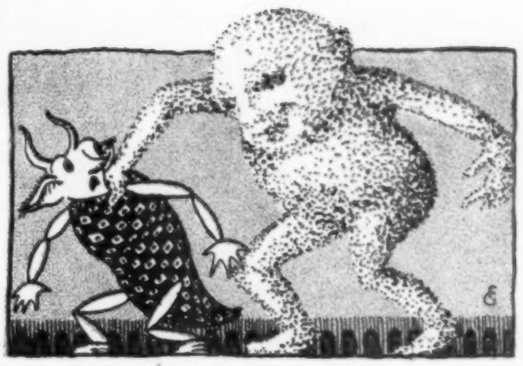


The white corpuscles perform several duties.

The blood really goes around the body in irregular loops. If you stretch out your arm shoulder height, you can imagine a loop drawn from the heart down your arm to your thumb, around and up your arm again, and back to your heart. You can imagine the same sort of loop down to

your foot and back to your heart; and the same sort of loop up to your nose, for instance, and back to your heart.

The blood circulates in such loops everywhere through the body. Out from the heart goes the fresh red blood through the arteries. Back to the heart goes the used purplish blood through the veins.



As soon as a germ comes along, a white blood corpuscle grabs it and swallows it.

You can imagine that heart of yours down in your chest—about the size of your two fists held together—receiving blood and pumping it out again—receiving and pumping, receiving and pumping—lub-dub, lub-dub, over and over.

You seldom lose any large amount of blood. Unless you have a deep cut, not much blood escapes; for there is something right in the blood that closes up most cuts by making the blood harden and dry quickly and turn into a reddish, brown clot. You know how it does. A scab forms that stops the blood from running out of the cut place, just as a cork stops medicine from running out of a bottle.

There are other substances in the blood, too. The blood, you see, isn't just red water. For one thing, there are cells in it.

There are different kinds of cells in the blood. In the first place there are cells called white corpuscles.

The white corpuscles have several duties which they perform for our bodies just as you probably have certain duties which you perform for your home, such as picking up your clothes from the floor so that the room looks tidy, or making your bed in the morning.

One of the most important duties of the white corpuscles is to fight the germs that come along trying to make you sick.

Germs are tiny things. You need a microscope to be able to see them just as you needed a microscope to see cells. Even so, germs can do miserable and nasty things to you. They can give boys and girls measles and colds and coughs and other diseases. They would give you diseases much more often, however, if it were not for those little white corpuscles.

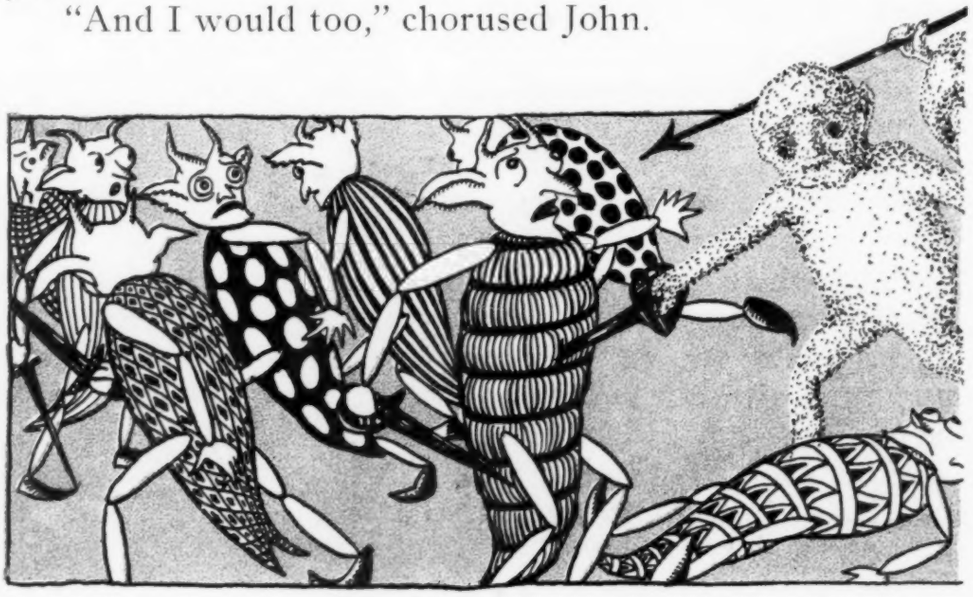
You see, as soon as a germ comes along, a white blood corpuscle swims right up to it, grabs it, and swallows it.

Suppose the germs that give you one of those horrid, sneezy colds were to come your way. They are so tiny, you know, that you would never see them; and they would just sneak up in through your mouth and nose. But they wouldn't get far before a whole army of white corpuscles would come rushing along to attack them. There would be a terrific fight. The germs would try to destroy the white corpuscles. The white corpuscles would try to destroy the germs. If the germs won, you would have a cold until more white corpuscles gathered together into a bigger army.

"'You get out of here. You get right out.' That's what the white corpuscles would be yelling at the germs if they could talk," put in Jerry.

"I'd root for the white corpuscles all right," added Jean.

"And I would too," chorused John.



You cannot see those white corpuscles, nor can you root for them; but if you are sick, you can help them to be much stronger fighters by taking extra rest. That is why you stay in bed when you have a cold. Then, instead of using your strength to do things, you are storing up strength to aid the white corpuscles in their battle against the germs.

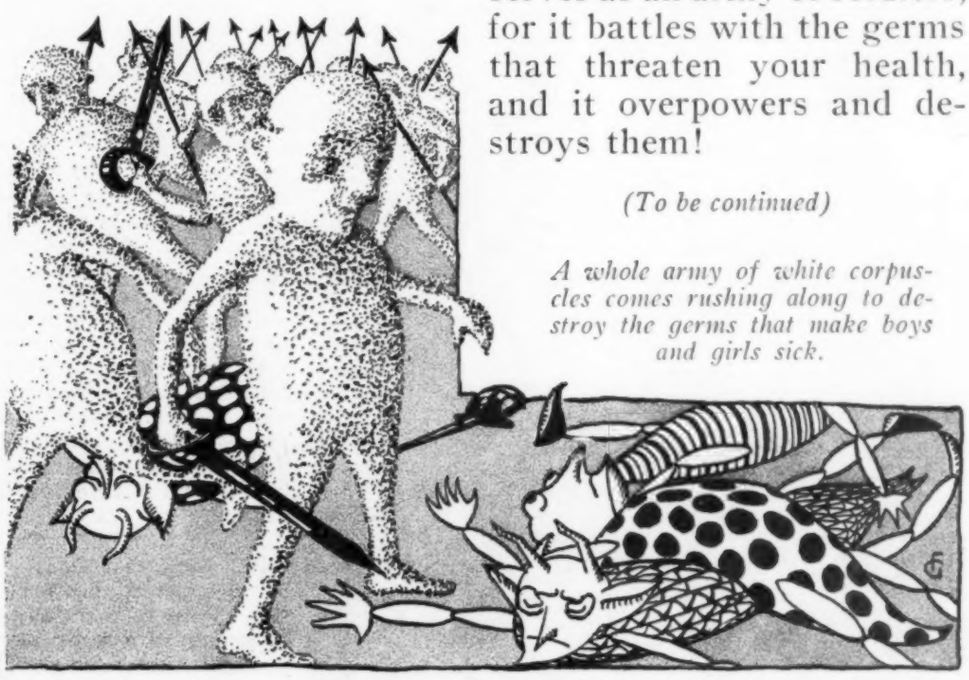
There are also other kinds of cells in the blood. There are red corpuscles. They carry air to all parts of the body. For even the most inside parts of you need air, or at least something called oxygen that comes from the air.

And there are other sorts of things in the blood as well. For example, the digested food is being carried to many places; about that you already know.

The blood performs so many important services for your body that it needs a helper. This helper is another fluid, called lymph.

No wonder the blood needs this helper, when you think of the many services it does for you! It serves as a delivery wagon, since it carries food and oxygen to every place where they are needed. It serves as a heater, because it helps to keep the body warm. And, as you recall, it serves as an army of soldiers, for it battles with the germs that threaten your health, and it overpowers and destroys them!

(To be continued)



A whole army of white corpuscles comes rushing along to destroy the germs that make boys and girls sick.

SCHOOL AND HEALTH

A Department Conducted by J. MACE ANDRESS, Ph.D.

67 Clyde Street, Newtonville, Mass.

Boston's Contribution to Health Education

IN THIS number of HYGEIA under the heading "Teaching Health" are presented some carefully selected examples of health teaching in the Boston public schools. In that city there is a definite time allotted in the school curriculum for health education. A course of study serves as a guide for the teachers. In the elementary schools, the teaching is carried on by the homeroom teachers. In the seventh, eighth and ninth grades the health teaching is carried on by special health education teachers who are properly certified. Safety teaching is carried on as a part of the health education program. Not only is health education taught as a special subject in the Boston schools but it is correlated with other subjects such as general science and civics. In keeping with the modern trend in health education the behavioristic aspects of health education are especially emphasized. The recent appointment of Dr. John P. Sullivan as supervisor of health education in the Boston schools is evidence of the city's keen interest in the physical and mental welfare of its boys and girls.

Boston's interest in health education today suggests the part that it has played in the health education movement in this country. In 1875, Bowditch studied the height and weight of 25,000 school children. This was the first attempt to get height and weight data on a large scale. In 1886, Boston took initial steps in using school yards as play centers during the time that they were not in use by the school. The placing of piles of sand in the yard of the Children's Mission on Parmenter Street in the North End marked the beginning of the playground movement in America. Dr. Durgin established the first regular system of medical inspection in the schools of the United States in 1894 following a series of epidemics among school children. In 1909 the school authorities took over the project of serving lunches in the elementary schools. Through such activities Boston has won recognition as a pioneer in the health movement.

The Forgotten Teacher

FOR many months every one has heard about the "forgotten man," that individual who comprises the large part of the population. He has his wants, desires, hopes, dreams, sorrows, joys and aspirations, but he is largely forgotten until some crisis arises. Then it is realized keenly that the forgotten man must be remembered and his needs satisfied, for he may be a potent force for social progress or revolution.

Today it is well also to remember the forgotten teacher. America has had her dream of a country where education should be universal, free and compulsory. We have pictured to ourselves a land of opportunity where our educational system, like a ladder, might have its lower rung in the kindergarten and its upper ones in colleges and universities. On such a ladder capable persons might raise themselves from the lower social and economic levels to the highest positions of trust and responsibility. We have believed and we must still believe that the realization of our great dreams of America are bound up with the success of our schools which depend on the skill, idealism and morale of the rank and file of our great army of teachers. We have sometimes forgotten that the future of America depends on the work of the schools and teachers today. If we weaken the school, we weaken America.

The economic and social crisis has borne down heavily on the schools. They have maintained more than their share of the hardship and depression. Too often it has been so much easier to economize by lopping off a considerable amount from regular school expenditures than to devise ways of securing a larger income through new sources. As a result thousands of schools have been obliged to close, and several hundred thousand children have been deprived of the privilege of attending school. In many cases those who go to school are forced to occupy temporary school buildings and get along with insufficient books and supplies. Thousands of teachers have had their salaries reduced below a living wage or have lost their positions.

In the face of such a national crisis the great body of teachers has demonstrated a practical idealism. Many of them have continued to go on with their work without protest for months at a time without being paid. Many of those trained in normal schools and colleges have been unable to find positions and have offered to serve communities for their carfares or even to serve them without charge.

In their love for childhood, teachers have been sensitive to the physi-

cal and mental needs of their pupils to the extent that they not only have worked harder and longer voluntarily but have spent their own money to furnish food and clothing for indigent children. In one large city where the school department decided that kindergartens could no longer continue because of the necessity for economy, the teachers of that system offered to have their salaries reduced provided that kindergartens might go on and serve the needs of little children. It would be hard to find a better example of practical idealism in the whole history of education.

The present condition of American public school teachers is a national disgrace. It is time for the American people to come to the aid of the forgotten teacher. It is necessary for them to do this in the interests of their own children, homes and communities and also as evidence of good sportsmanship in securing a square deal.

TEACHING HEALTH

(In this column will be published each month concrete examples of good health teaching. Teachers are invited to send in contributions not exceeding 600 words and preferably less to the editor of this department. Illustrations of the actual work of children will be welcomed. Contributions accepted will be paid for but no manuscripts will be returned.)

LUNCHEON IS SERVED

IT IS 11:30 on any school morning at the Trade School for Girls in Boston. The pupils of the catering department have taken the last pan of rolls from the oven, placed the last dish of vegetables on the steam table and covered the last tray of sandwiches, before sitting down to their own luncheon and a brief period of relaxation in anticipation of the busiest hour of their day.

The occasional opening of the kitchen door has caused fragrant odors of food to escape through the building, stimulating the appetites of from 600 to 700 hungry girls who have been busy in shop and classroom since 8:30. "What's for lunch?" has perhaps been whispered as a student messenger, sent to one of the school kitchens, resumes her place at desk or work table.

Daily, the faculty and student body are served a well balanced, nourishing luncheon at a minimum cost by the pupils of the catering department. The student body is composed of girls from 14 to 17 years of age, who come from Boston and cities and towns within commuting distance. They enroll at the school to fit themselves to become skilled workers in trades, crafts and manufacturing pursuits. Since there is no upper age limit, adult women enter the various departments throughout the year for upgrading in their chosen trade or for preparation to enter a new type of occupation. Various racial groups are represented.

The very nature of the organization of a trade school demands that all instruction is measured in terms of its practicability. In a trade or vocational school, the course of study in each department has for its primary purpose the fitting of pupils for profitable employment. Approved schools conduct a productive shop which conforms in all desirable factors with commercial standards. The work in which pupils are trained is planned and perfected with reference to its commercial value. The products are judged by commercial standards and must be of a salable character under market conditions. In addition, the general atmosphere, system, standards, practice and administration must be those of a good industrial shop.

The time allotment of materials of instruction provides that approximately 60 per cent should be devoted to shop work, on a unit basis; 20 per cent to the related subjects—the mathematics, English, art and science of the trade, and 20 per cent to so-called general improvement instruction—cultural English, music, physical education, personal and industrial hygiene.

All these factors are involved in varying degrees, in the planning, preparation and serving of the pupils' luncheon. The maximum of service, however, is rendered when the pupils' luncheon project functions as a practical combination of a trade and a health education program.

The countless details involved in lesson planning, marketing, cooking and serving are the direct responsibility of the department head and her assistants. The school nurse and physicians constantly check each girl's physical condition. For some, a special diet is advised; others benefit from midmorning nourishment; simple breakfast is served to sufferers from car-sickness. Tactful correction of improper food selection by those who carry lunches prepared at home is occasionally necessary.

"The Luncheon of a Working Girl" receives generous treatment as a topic in the hygiene classes. The director of school hygiene and his staff are always "at your service," while the supervisor of health education anticipates problems with his suggestions.

The pupils' luncheon is prepared and served by first year students of the catering department and by pupils from other departments who are required to have training in food preparation for one-half day for one semester as a part of their general improvement education. On the same principle, pupils of the catering department have a similar time allotment for sewing as a part of the general training that all girls will find invaluable.

The second and third year catering pupils prepare and serve luncheon for guests and faculty. They fill daily orders for breads, cake and pastry and for seasonal festivities, as at Thanksgiving and Christmas, and also for teas, luncheons and bridge parties, to be served at the homes of customers.

The finishing touches are added to the pupils' luncheon by hygienically masked student cooks in the Boston Trade School for Girls.

Pupils' menus are planned with the idea that, for a large number, the luncheon will be the principal meal of the day; that food must be provided that will meet the energy needs of adolescent girls; that the right kind of proteins must be furnished; that the necessary minerals and vitamins and a sufficient amount of roughage must be included. The problems of the "finicky" appetite and the modern enthusiasm for a boyish figure must be recognized. Certain racial food habits and prejudices must also receive consideration.

The menus are simple. The materials used, of course, are of the highest quality. Every effort is made to avoid monotony. The educational factors of subject matter, sequence of training, individual instruction, repetitive training, with a variable training period, must enter into all menu planning and trade instruction. A hot main dish of meat, fish or eggs is served daily for four cents. This price is the maximum and is charged also for the bottle of milk. A salad, a choice of two sandwiches and of three desserts, one of which is always a fruit dessert, and some form of whole grain biscuit, roll or muffin with butter complete the principal part of the menu. In addition, fresh fruit, white and whole grain bread, butter, milk and cocoa are always served, and cold fruit drinks are included in warm weather. Gelatin desserts are always made with a fresh fruit base.

By careful study of prevailing market prices, occasional "bargains" in food may be secured. During spring of the current year, a rib lamb chop with baked potato, baked ham with creamed potatoes, and a New England boiled dinner of meat and two vegetables were among the four cent dishes. The crowning achievement of the year was the full course turkey dinner with choice of individual mince pie or plum pudding for ten cents.

We are required to set prices that will cover the cost of materials. Despite the low prices, each year the department shows a profit. Some of the menus may be of interest:

Menu 1	
Fruit	.03
Sausage roll with tomato sauce	.04
Egg and celery salad	.04
Peach marmalade sandwich	.02
Nut bread and cheese sandwich	.03
Graham roll and butter	.02
Coconut nut cake	.03
Orange jelly	.03
Cocoa	.03
Milk	.04

Menu 2	
Fresh fruit cup	.03
Beef and vegetable soup	.03
Beef liver, creamed potatoes	.04
Cabbage and pineapple salad	.03
Cheese and olive sandwich	.02
Lettuce and graham bread sandwich	.02
Date bran muffin, butter	.02
Prune whip	.03
Orange tapioca cream	.03
Cookies	.02

Menu 3	
Fruit	.03
Fish chowder and cookies	.03
Salmon and rice croquettes, peas	.04
Molded tomato and celery salad	.03
Cheese biscuit, butter	.02
Chopped ham sandwich	.03
Raspberry jam sandwich	.02
Cream puff	.03
Apricot sauce, cookie	.03
Frosted gingerbread	.03
Milk	.04
Cocoa	.03

Ester McNellis,
Boston.

HEALTH FOR THE BUSINESS WOMAN

FOR SEVERAL years I had given to a class of high school girls a rather traditional series of weekly talks and recitations on cleanliness, fresh air, diet, sleep and other hygienic subjects. Realizing, however, that this presentation was boring to me and obviously uninteresting to them, I decided to give the course in terms of the girls' future careers. As they would soon enter the business and professional world, I adapted the course to "Health for the Business Woman."

I secured some forms used by large business houses in rating applicants for employment and found some old magazine articles on what employers look for in employees. From these an opening lesson was developed on the importance of personal appearance to an applicant for employment and to a person actually engaged in business. This approach led up to some of the points of good personal appearance, the importance of skin, teeth, hair, eyes, posture and dress. The reactions of the girls made it evident that a most interesting and helpful approach had been found.

The following lessons dealt with these points in turn, keeping throughout the point of view of what knowledge would actually be most interesting and useful to a young business woman. A few examples will show the sort of lessons actually given.

In the work on the skin and its care, in addition to considering the kinds of baths and their uses, discussions were held on the various ways of cleansing the face, the relative advantages of soap and water and of creams, the sort of face powder to use and how to use it, and the correct kinds and uses of make-up. With regard to the hair, I showed in class various kinds of hair brushes and how to use them, and demonstrated the uses of hair tonics.

When proper diet was discussed, restaurant menu cards were procured, and then on the basis of assumed salaries the class figured out how much the young girl in business could afford to spend for lunch and showed from the menus good luncheon combinations within that price. The same thing was done for the sort of dinner she might order when staying in town at night for a movie.

Working on posture, the girls cut from newspaper advertisements pictures of shoes they thought would be orthopedically correct as well as suitable for business wear. In connection with this, one lesson was spent in a discussion of suitable business dress. For this lesson the girls cut from magazine articles and advertisements pictures of costumes they thought might be suitable and within their probable salary, and both they and I tried to find magazine articles on a business woman's wardrobe.

The conclusion might be erroneously drawn that I was conducting a sort of "health and beauty" newspaper column, or one on current fashions. I have indicated the type of lesson in such detail to show the method of approach, which, if my own observations and the comments

of the girls are of any value, resulted in immediate interest and lasting profit. This approach was followed by lessons with as full a scientific foundation as time permitted.

I found that with this background the girls became increasingly critical of much advertising material. Not only did they become interested in such examples as those already mentioned, but I soon had to answer questions on the extent of halitosis and "athlete's foot" and the exact value of raisins in the diet.

If the enthusiasm of the girls had been the only determinant, I could easily have occupied the whole year with such lessons as those described. However, I feel that any series of lessons in health is incomplete when it deals with the individual only; community health should also be included. Therefore time was devoted to "The Business Woman as a Citizen." A most interesting lesson led to a determination of what proportion of the average citizen's money actually went to support community health agencies. Then came the natural question, "What do we get in return?"

This question was answered by literature from the various agencies, by letters from bureau and department heads, and best of all, by personal talks given by state and municipal health department officials. I felt that my goal—a woman conscious of the importance of her own health and that of her community and equipped with a knowledge of the proper means of procuring personal and community health—had been attained, at least partially, when many of the girls voluntarily took after-school trips to some of the health agencies that had been described.

M. Barbara Dee,
Boston.

GAMES WITH CARDBOARD TRAFFIC LIGHTS

THE fourth grade manual training class of the Christopher Gibson School made a miniature set of traffic lights for the primary classes. The set is made of cardboard, about 6 by 13 inches, with little cardboard slides which cover or uncover the green, red and yellow circular "lights."

There was no formal drill with this traffic light, but it was used in some delightful games. Dismissal was made with it; part of the class imitated automobiles and part pedestrians. Great care was taken to avoid accidents and to move on the respective green lights only.

Lines for streets and sidewalks were ruled, and a policeman was chosen to work the light and watch carefully that neither spectators nor participants should be "jay walkers." Hence, it was easy to get an automatic response to red and yellow lights.

Besides being an excellent subject for citizenship period, this traffic light project carried over into other phases of the day's work. It became a lesson in oral English while new words were added to the speaking vocabulary as "automobilist," "pedestrian" and "caution." Every one became motorist-minded, and children who had been riding told daily of signs they had read, such as "Caution Children" and "One Way Street." New phrases were added to their reading vocabulary. Each day the school bulletin had a message from a safety fairy, such as a slogan, a poem or a safety story.

The project came to a climax at the end of the week when we had a silent-reading check-up. Each child was given a mimeographed sheet with printed directions beside an inch circle. There were five circles in all with the following directions for making the cardboard traffic "lights":

1. Make a rectangle of newsboard, 6½ by 13 inches, to be held with short side at top.
2. Divide into smaller rectangles, 3¾ inches each, leaving space at top and bottom.
3. Paste circles 1½ inches in radius inside the three center rectangles.
4. Underneath the circles put a runner measuring 1 inch, folded in center.
5. On the sides, paste pieces of vellum 1½ inches across.
6. Make paddles to slide on the runners; the part covering circles should be 3½ by 3½ inches. The handle will be 2½ by 3½ inches.

J. Frances Gibson,
Boston.

NEW HEALTH BOOKS AND TEACHERS' MATERIALS

STATISTICS may be ghastly! The number of cars run on the American highways decreased by half a million in 1931 as compared with 1930, and yet there was an increase in the number of deaths and injuries caused by automobile accidents. Nearly a million persons were injured and 34,400 were killed in 1931. In the eighteen months ending Dec. 31, 1931, more Americans were killed by cars than were killed in the front line trenches in eighteen months of the World War. If those who died were to march past your house six abreast and six feet apart, how many hours would it take? If the funeral procession of each person were a quarter of a mile long, how far would the combined procession reach? How do the death losses from automobile accidents compare with the mortality from tuberculosis? Even a superficial study of these facts and problems shows that the prevention of automobile accidents should command the serious attention of citizens and schools.

Victor W. Page has written a practical book for the automobile driver. "Prevention of Automobile Accidents—Safe Driving Assured"[1] should be studied in every high school. A place for it could be found in courses in hygiene or civics.

WITHIN RECENT years it has become popular to get a committee outside of a school or a school system to make various kinds of surveys. The survey by outside agents is not so common now because of financial reasons but that need not prevent an efficient survey by a teaching staff itself. This has many advantages since teachers are more likely to be interested in the facts revealed and try to do something to correct conditions.

Teachers or groups of teachers who wish to conduct a survey relating to health and safety will welcome "Safety and Health of the School Child—A Self-Survey of School Conditions."[2]

THROUGH its valuable reports the White House Conference on Child Health and Protection has done much to educate the American people concerning the welfare of their children. Professor Marion Lyon Faegre of the Institute of Child Welfare, University of Minnesota, has performed a real service for teachers and parents in preparing these pamphlets based on the reports of this conference. They are "Booklet on Growth," "Booklet on Personality" and "Booklet on Habits."[3] A brief but helpful bibliography and excellent questions to stimulate thought are found at the end of each chapter.

[Note.—The editor is informed that Prof. Marion Faegre's reports of the White House Conference are now available in a generous packet of child study and mental hygiene literature. These reports are verbatim reprints of the fifteen original White House Conference pamphlets. This packet, which formerly sold for $1.25, is now available for 70 cents. Address State of New York Mental Hygiene Department, Albany, N. Y.]

1. By Page, Victor W. Price, 50 cents. Pp. 172. New York: The Norman W. Henley Publishing Company, 1932.

2. By Rodgers, James Frederick, M.D. Pp. 29. Washington, D. C.: Office of Education, United States Department of Education, 1932.

3. Prepared by Marion Lyon Faegre. Price, single booklet, 15 cents; set of three booklets, 30 cents. St. Paul: The Farmer's Wife.

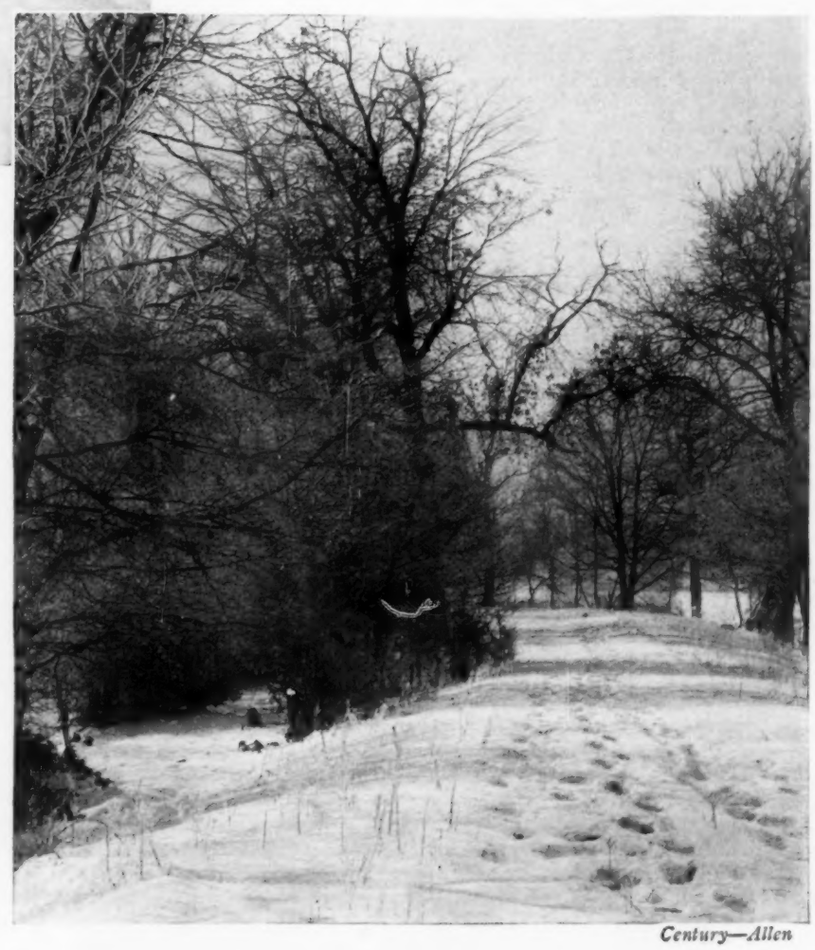
H. Armstrong Roberts

IF WINTER COMES—
Can These Sports Be Far Behind?

A sled like the one above gives many jolly rides when traffic and safety rules are obeyed.

Richard K. Wood

Skaters should watch for holes such as this one caused by the harvesting of the ice crop on Raquette Lake in the Adirondacks.



Century—Allen

The beauty of snow-clad landscapes invites the hiker to enjoy a few health giving hours.

NEW BOOKS ON HEALTH

WHAT WE ARE AND WHY

By Laurence H. Mayers and Arthur D. Welton. Cloth. Price, $3. Pp. 340. New York: Sears Publishing Company, Inc., 1933.

THE PUBLIC has been deluged of late with volumes on the endocrine glands and their relationships to life and health. One of these books, "The Tides of Life," by R. G. Hoskins was selected as the scientific book of the month. The volume here reviewed is much briefer and much simpler in its presentation than any of the books heretofore offered. It is, moreover, presented in a literary style much more journalistic than that of other books previously available on the subject. Each of the important glands of internal secretion together with its general functions is listed. The authors discuss the effects of the glands on sex, personality and the cycles of life. The relationship of the functioning of these glands to the formation of giants and dwarfs, and also to the development of various special types, such as the obese, is also described. There are hints on the relationship of the glands to crime, and also on the effects of these glands on the passions of man. A brief glossary of scientific terms concludes the book, which does not have an index. The interest of the volume is enhanced by a recitation of various typical cases, and by the inclusion of some striking illustrations.

MORRIS FISHBEIN, M.D.

HEROIC AGE OF SCIENCE

THE CONCEPTION, IDEALS AND METHODS OF SCIENCE AMONG THE ANCIENT GREEKS. By William Arthur Heidel. Price, $2.50. Pp. 203. Baltimore: Williams & Wilkins Co., 1933. Published under the auspices of Carnegie Institution of Washington.

ON READING this book of modest appearance by the professor of Greek at Wesleyan University, one is reminded of another professor of Greek, Paul Shorey, of the University of Chicago; the two men make one feel that there must be some peculiar cultural influence about Greek after all. As one reads Shorey, one is impressed with the thought that Shorey has taken for his province not only Greek but all literature, and that his judgment of all literature is broadened and mellowed by a first-hand knowledge of the mind of the Greeks. The same impression is derived from a reading of Heidel's "Heroic Age of Science"; there is evidently a full understanding of the Greek mind and of all present-day knowledge of what the Greeks did in science. From this point of vantage Heidel describes quietly, incisively and with an abundance of illustration the achievements of the Greeks in science. He is not argumentative; he simply overwhelms the doubter with his facts.

The work is a thesaurus of Greek scientific thought and achievement as shown in the remnants of Greek scientific literature that have come down to us. Any one who thinks, as so many do, that science began about seventy-five years ago, ought to be improved by reading this book. It is interesting to learn that Heidel finds in the works of Aristotle and Hippocrates and their schools his best illustrations of the Greek scientific mind in medicine. Especially does he use the Corpus Hippocraticum in showing the capacity for scientific observation and the precise scientific thinking which characterized the Greek mind at its best. Contrary to the common statements of historians that the Greeks had little interest in science but thought that the only worthwhile study was philosophy, and that they based their science on experience without the resort to experiment, Heidel shows that there is much evidence of scientific interest among the Greeks and abundant record of scientific experimentation by them. A full reading of the book leaves one with a feeling that is well summarized in one of the author's sentences: "Wherever we turn in Greek literature we find the same devotion to research and the same open mindedness to such truth as could be discovered, along with the frank confession of error and the recognition of the limitations of art or science." The work is well documented.

The book is doubly worth reading for its substance and for its style. Its style is style without ostentatious evidence of it; it is simple and clear, with taste and intelligence manifest in its phrasing, and scholarship in its precise use of words. The striking title is taken from Whewell's "History of the Inductive Sciences": "The sages of early Greece form the heroic age of science."

W. A. PUSEY, M.D.

HOWS AND WHYS OF COOKING

By Evelyn G. Halliday and Isabel T. Noble. Revised Edition. Cloth. Price, $3. Pp. 252. Chicago: The University of Chicago Press, 1933.

THE FIRST edition of this book was published in 1928. The present edition has had numerous alterations and additions to enhance its usefulness. The authors are in the department of home economics at the University of Chicago. Their book is divided into eleven chapters according to the various types of food concerned, including among other foods, vegetables, pastries, candy, ice cream and beef. The concluding chapter concerns meal planning. Here is a scientific cook book which provides not only recipes and proper methods of preparation of foods but also advice for conserving food values in preparation. The chapter on beef is especially valuable because of a large number of excellent illustrations to aid the purchaser in choosing and cooking the meat to make the best of it as a food. The authors do not hesitate to mention the names of well known packaged foods, so that their work is altogether a practical one.

M. F.

QUESTIONS AND ANSWERS

Brain

To the Editor:—I recently read that the most significant difference between the brain of an average man and a scholar is not in size, weight or shape but in blood supply. Kindly advise whether this is correct and the reason for it.

H. M., Georgia.

Answer.—For centuries, man has speculated as to why one individual has greater mental power than another. During the last hundred years many specific studies have been carried out in attempts to answer the question. Only general statements can yet be made. On studying the entire animal kingdom, it is evident that the position of any animal from the standpoint of brain power depends on the nerve cells that connect and correlate the sensory and motor mechanisms. These nerve cells, which are known as association cells, are more abundant and more richly connected in the higher animals than in the lower ones. They make up large portions of the cerebrum and are found in its surface layers which make up the cortex. Many workers have thought they could detect similar differences in the brains of the higher and lower races of man.

It is probably correct to say that one man is intellectually superior to another because he has either more or better association cells or because the ones he has are more richly connected. Of course he may enjoy all these advantages at the same time. If such an idea is correct, it is evident that the size and shape of the whole brain in themselves may indicate mental power only in a general way. A small brain with association cells highly organized might be superior to a large brain poorly organized.

Since the association cells are found in the surface areas of the cerebrum, the extent of the wrinklings or convolutions may give a somewhat better idea of mental power. After all, it is the quality and capacity of these association memory cells which determine intellectual ability and allow one man to be a genius while another must remain mediocre. What determines or modifies the capacity of these nerve cells? Such a question is not within the scope of scientific knowledge at the present time. It may well be that the richer the blood supply, the better these cells are. Such differences in blood flow, however, cannot be measured at present. Early training, or education, is generally believed to make for more and more connections between the nerve units and consequently for increased power. Certain families or strains are undoubtedly provided by heredity with association cells of higher capacity than others.

Breast, Swollen Nipple in Boy

To the Editor:—What would cause the nipple of the left breast to be swollen in a boy 15 years of age? The swelling disappears when the finger is applied for three minutes or so and then reappears as soon as the pressure is removed.

S. R., Florida.

Answer.—Without personal examination, it is impossible to say what would cause the left nipple to be swollen in a young boy, aged 15. A physician should be consulted at once in order to ascertain whether there is any infection or other condition of the breast which requires medical treatment.

Blood Tests

To the Editor:—How does a blood count compare with the Tallqvist method of iron blood test? Is not the Tallqvist method about 10 per cent lower?

L. B., California.

Answer.—It is impossible to compare a blood count with a Tallqvist hemoglobin test because they are altogether different. The hemoglobin test by the Tallqvist scale measures the percentage of hemoglobin in the blood as compared with a standard color scale. A blood count, on the other hand, measures the number of cells of different kinds in the blood. The usual routine blood examination includes both the Tallqvist hemoglobin estimation, or its equivalent, and the cell count.

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a three-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed. Anonymous letters are ignored.

Artificial Ice Versus Natural Ice

To the Editor:—Recently in the local papers, pedlers dealing in natural ice have been running ads inferring that natural ice is as pure as artificially manufactured ice. Could you refer me to men who have made tests on river ice or to articles dealing with the outcome of such tests? The sources of river ice vary, of course, and information would necessarily have to be general.

G. H., Iowa.

Answer.—The question of artificial ice versus natural ice was the subject of a great deal of discussion about ten or fifteen years ago. At that time, it was the consensus that there is little choice between natural ice and artificial ice, provided only that the natural ice is harvested from bodies of water which do not freeze to the bottom. The explanation is that in freezing and forming ice, the water, by crystallization, excludes most of the impurities. If the body of water freezes to the bottom, obviously the impurities could not be excluded, because there would be no layer of water underneath the ice to which the impurities could go.

If artificial ice is frozen from impure and contaminated water, it is likely that the core of the artificial cake will be unsafe to use because, frozen as it is from the outside in, the impurities have a tendency to concentrate in the center of the cake.

In freezing, water does not exclude all impurities and may retain living bacteria. Storage, however, greatly reduces the number of these bacteria.

From a strictly scientific standpoint, the controversy between distributors of natural ice and distributors of artificial ice is really more or less a tempest in a teapot. Neither kind of ice is desirable if it is made from impure water; there is no choice between them if the natural ice is harvested from uncontaminated lakes or streams and the artificial ice is manufactured from water which is fit to drink.

Some cities have ordinances which require distributors to paint on the sides of their distributing vehicles a statement in letters of minimum height, which differs locally, to identify their product as either manufactured or natural, as the case may be.

A remarkably effective antiseptic

Use it in your own home . . .
Doesn't sting in open wounds

HEXYLRESORCINOL SOLUTION S. T. 37 is stronger than carbolic acid in any usable solution and it spreads more rapidly and more deeply than many other antiseptics into the crevices of wound tissue.

It is found on the dressing carriages of many great hospitals. Yet it is safe for you to use right in your own home, and to teach your children to use! Safe even if accidentally swallowed!

Pour it freely, and at once, into cuts, scratches and open wounds. It will not sting or burn. If the injury seems a serious one, of course, consult your doctor.

Hexylresorcinol Solution S. T. 37 bears the Seal of the Council on Pharmacy and Chemistry of the American Medical Association, which should serve as an indication of its trustworthiness.

Give yourself and your family this modern antiseptic safeguard. It can be kept on hand at little cost. The 50c bottle is now a whole ⅔ bigger than before.

And you get the large size for only $1.00 instead of $1.25. Prices are slightly higher in Canada. Buy a bottle today at your druggist.

HEXYLRESORCINOL SOLUTION S. T. 37

Made by **SHARP & DOHME**

ACCEPTED AMERICAN MEDICAL ASSN Council on Pharmacy and Chemistry

The United States of America enjoyed better health and had a lower deathrate during the year 1932 and in 1933
[up to the time this message went to press]
than ever before in its history

Keep up Momentum

WHEN you read that during many recent months, in spite of the financial depression, the American people enjoyed better health and had a lower deathrate than ever before, you may wonder why. One outstanding reason is that our people were well prepared, physically, to resist sickness.

In past decades, millions and millions of dollars were invested to prevent as well as to cure disease. They returned rich health dividends. The movement for healthier living conditions in all parts of the country had gained such momentum that temporary obstacles and difficulties failed to check it.

You know that the deathrate from tuberculosis has declined steadily. You know that smallpox, typhoid and diphtheria can be prevented. You hope to see the day when in this country whooping cough, measles and scarlet fever will disappear, as yellow fever and cholera did—thanks to scientific preventive methods. Scientists are faithfully working day and night for these victories.

The lower deathrate is due in no small measure to the present efficiency of hospital and nursing services that have required years in which to develop. In assuring pure water, safe milk, clean food, swept streets and proper sewerage systems your Health and Sanitation Departments did their part in making health records in 1932 and 1933.

Some of the forces upon which the health of people depends are financed by state, county and local appropriations. But many of the forces which have contributed so greatly to general welfare—the Red Cross, the Tuberculosis Associations, the Cancer Societies and others—are largely dependent upon private contributions.

Today the forward health movement has been slowed down in some localities because of reduced appropriations and smaller contributions. In certain other communities much of the official health work has stopped.

While the people of our country are working shoulder to shoulder, collectively and individually, to restore material prosperity, no greater tragedy could befall them than to sacrifice their greatest wealth—their health. If you would have increasing health and decreasing disease, keep up the power and the momentum of the health movement.

METROPOLITAN LIFE INSURANCE COMPANY
FREDERICK H. ECKER, PRESIDENT ONE MADISON AVE., NEW YORK, N.Y.
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"Maternal Impressions"

To the Editor:—One sometimes hears of cases in which some incident experienced by an expectant mother leaves a mark of some sort on the child. For instance, there is the case of the mother-to-be who was frightened by a mouse and, in fear, threw up her hand to her cheek, as women will. When her baby was born, he had a large mole on his cheek in the shape of a mouse. Can you explain this?

L. P., Maryland.

Answer.—So-called marking of babies, as a result of loathsome or frightening objects seen by the mother during the pregnancy, has nothing to do with the incident to which the marks are attributed. The superstition about "marking" babies is old and has persisted because the scientific knowledge which disproves it has not penetrated to the public.

These marks which occur in the skin are congenital malformations, the cause of which is not understood. They are usually formed early in the pregnancy; many cases on record prove that the mark existed before the so-called maternal impression to which it was attributed. Moreover, the marks occur where there has been no "maternal impression."

There is no physical connection between the nervous systems of the mother and the unborn child.

The occurrence of marks is purely a coincidence. Their irregular shape leads imaginative persons to compare them to the shape of the animal or other objects that frighten the mother. Belief in this superstition is gradually being overcome.

Basal Metabolism Tests

To the Editor:—Are basal metabolism tests accurate? What conditions would such tests bring to light?

L. B., California.

Answer.—It is certainly true that basal metabolism tests are not 100 per cent accurate. On the other hand, they are useful in assisting in the formation of a diagnosis in certain types of cases. A basal metabolism test gives information as to the amount of oxygen consumed in a given time by a patient at complete rest or, in other words, the length of time required for a given patient to consume a measured amount of oxygen. By calculations involving the patient's height, weight and body area, the metabolic rate can be determined. Change in the metabolic rate may occur in a number of conditions, but most commonly it is found in disturbances of the thyroid gland.

"Not Today I'm Stiff"

TWICE in a week he has turned down the chance of a game. He feels stiff—has a slight pain. At home they say, "He has growing pains." "He shot up too fast."

But parents should not view such ailments lightly, for they are not natural. Instead, they usually indicate a faulty physical condition—possibly infectious arthritis or calcium deficiency.

To avoid such conditions and to prevent their development into something more serious, a health examination should be made periodically.

Complete health examinations are essential for growing boys and girls—just as necessary for grown-ups. At least once a year go to your physician. Be sure x-rays are employed. For radiographs often are the only means of detecting disorders early, when correction can be prompt.

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X-Rays and Radio-Active Waters in Treatment of Cancer

To the Editor:—What is your opinion of the giant x-ray machine which was recently installed at Mercy Hospital, Chicago, for the treatment of cancer? What are the merits of radioactive water in the treatment of cancer of the stomach? R. F., Indiana.

Answer.—The x-ray machine which was recently installed at Mercy Hospital, Chicago, is in accordance with the increasing recognition of the importance of the x-rays in the treatment of certain kinds of cancer. Obviously, such a giant source of power and radiant energy must be handled with the utmost care and only by men thoroughly trained in the use of the x-rays.

Radioactive waters should never be used for treatment of cancer of the stomach, because if they actually contain radium they are exceedingly dangerous, and their use is liable to have a fatal result. Many advertised radioactive waters do not contain any radium and are nothing but fakes.

Whenever there is a suspicion of cancer of the stomach or of any part of the body, a reputable physician should be consulted.

Thyroid Deficiency

To the Editor:—What are the symptoms of cretinism? Can a cretin who is fed thyroid attain normalcy, and then, deprived of regular amounts, revert to cretinism? D. P. C., Connecticut.

Answer.—There are two principal kinds of thyroid deficiency: cretinism and myxedema. There are other disturbances of the thyroid secretion, but these are the two principal manifestations of lowered functioning of this gland.

In cretinism, the deficiency begins at birth or soon after, and the child does not develop normally. In myxedema, the condition may arise after normal development has taken place. The results are approximately the same, allowing for the differences in previous development, but cretins are much more difficult to treat than persons with myxedema. Many cretins die before they reach the age of adolescence.

In cretinism, and especially in myxedema, the feeding of thyroid extract is helpful. It can usually be depended on, if treatment is begun early enough, to restore at least an approximation of normal appearance and mentality. On the other hand, when thyroid feeding is discontinued, especially in cretins, a return to the former stage is to be expected.

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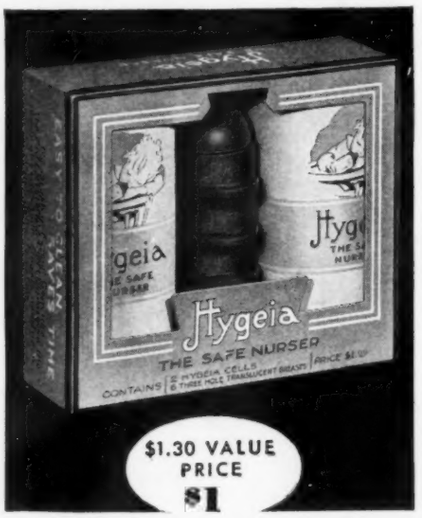

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Milk: Grade A and Certified

To the Editor:—Kindly inform me as to the difference between Grade A and Certified milk in the feeding of infants and young children. What are the advantages of each?

L. M. M., New York.

Answer.—Certified milk is milk which is produced under carefully supervised conditions, such as high-grade surroundings; healthy cattle, tested and proved to be free from tuberculosis and contagious abortion; scrupulous cleanliness of surroundings; careful feeding of cattle; scrupulous cleanliness of utensils and workers; periodic inspection of the health of milk handlers; bottling of milk in carefully sterilized bottles, handled in a plant where extreme care is taken with respect to cleanliness; dating; shipment in ice, and protection by double capping. Certified milk must be produced under a license from a medical milk commission sponsored by a medical society or an academy of medicine. There is an association of medical milk commissions which determines the standards for certified milk on a national scale. The word certified, as applied to milk, is protected by a United States patent and can be used only by licensed farms. Most certified milk is obtained from Guernsey cattle or other breeds which produce milk with a high content of butter fat. For this reason it is frequently not so good for baby feeding as is milk from Holstein cattle, which is lower in butter fat and is more suitable under many conditions for the feeding of infants.

Grade A milk is hard to define, because different cities have different standards for Grade A milk. It is supposed, as a general rule, to be a high grade of raw milk, often from Guernsey or Jersey cattle, produced under conditions which approach those of certification. However, Grade A milk is not licensed by a medical milk commission and is not to be regarded with the same confidence as certified milk.

Before it is decided which milk is to be used for baby feeding, a physician should be consulted.

"O blessed health! thou art above all gold and treasure; 'tis thou who enlargest the soul and openest all its powers to receive instruction and to relish virtue. He that has thee has little more to wish for, and he that is so wretched as to want thee, wants everything with thee."—*Sterne.*

HOLIDAY ROASTING AND BROILING

(Continued from page 1077)

with the other grades it is better used as baked steak or a small roast, cut thin and chicken fried, or it may be cooked in one of the many ways with vegetables for seasoning and to furnish moisture. Such a steak is pounded or scored with a knife, and salt, pepper and flour are pounded into it. After being seared in a hot skillet, it may be covered with vegetables, such as sliced onions, green peppers and celery, or with tomato soup and peas, and baked an hour in the oven at 400 F. or steamed in a covered pan over a low fire until it is tender.

Bacon is delicious broiled, and it may be given to a small child or to an invalid who would not be allowed to eat fried bacon. Lamb chops, pork chops and fish filets are broiled in the same manner as steak. While you are broiling, you may wish to slip in a few extras to use for garnishing the meat platter and to complete the meal, such as cooked sweet potatoes or Irish potatoes brushed with butter, tomatoes dipped in buttered bread crumbs, bananas dipped into lemon juice, pineapple slices, mushrooms peeled and buttered, or apple slices. These will not require as much time as steak; the exact number of minutes will depend on the thickness of the pieces, and whether they are raw or already cooked.

Daintily broiled foods and deliciously roasted meats are appealing for holiday meals, and with the modern aids to cooking they can be prepared, almost as though by magic, with extremely little effort. In fact, after putting the roast in the oven and setting the electric timer and clock to turn the current on and off at the proper time, the busy housewife can go serenely about her household duties or outside activities while her dinner cooks itself!

So, very, very slowly, with many a slip and stumble, and many a scar to show for early errors, mankind has reached the point where Nature is no longer a thing to fear, no longer a thing to fight, no longer a thing to conquer even, as a rebellious slave; but rather a bountiful mother, to be studied, understood, cooperated with—blood of our blood, bone of our bone, literally as well as metaphorically—and harmful to us only when we fail to understand, or venture rashly into foolish feats.—H. W. Hill in *California Public Health Bulletin.*

Shrink from the hand that's held a cold-filled handkerchief

KLEENEX
keeps hands germ-free

COLD germs slip through handkerchiefs as through a sieve. Alive, active, infectious, they stick to your fingers. They are transferred to other hands. Soon others have caught your cold!

Keep hands germ-free

For the sake of those near you, use Kleenex when you have a cold. Kleenex, far closer in texture than any handkerchief, stops germs from reaching fingers. Powerfully absorbent, it holds germs, mucus, fast, prevents their escape.

Each Kleenex tissue is used only once, then destroyed.

Always clean and dry, soothing, velvety, Kleenex does not rub your nose raw, as rough, damp, cold-soaked handkerchiefs do. Why continue to wash cold-filled handkerchiefs or spend money for laundry? The Kleenex patented pull-out carton assures economy. Hands cannot contaminate other sheets.

For cold cream removal

Try Kleenex for removing face creams, too. Kleenex is so absorbent that it *blots* all impurities from the pores.

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WHY KLEENEX IS SAFE

See the micro-photo to the upper left. It shows a handkerchief magnified 64 times . . . shows why germs pass through handkerchiefs as through a sieve. Below is Kleenex, magnified 64 times. Note the close weave. Kleenex stops germs. Actual tests show handkerchiefs leave approximately 1000 times as many germs on your fingers as Kleenex does.

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WAIST-LINES AND LIFE-LINES

(Continued from page 1084)

lean meat twice daily. Fish and egg-white may be substituted. Carbohydrates are provided through 5 per cent vegetables. The vitamins are introduced by giving daily doses of viosterol and fresh yeast and on alternate days 100 cc. of whole milk and 100 cc. of orange juice. A balanced salt solution is also administered for the inorganic salt requirements.

To reduce obese patients rapidly, not more than from 1 to 1.5 calories for each pound of body weight is provided in the diet. On such a restricted caloric intake there is a weight loss of from 2½ to 4½ pounds of true fat tissue. In the early stages of this dietary regimen, the actual weight changes may be much greater or much less than anticipated, owing to shifts in the water balance; but over a period of several weeks an average weekly loss in weight of from 3½ to 5 pounds may be secured. Strang and Evans have used such a diet with favorable results on obese patients of ages from 12 to 67 years. They report that the usual accompaniments of rapid weight loss, such as weakness and hunger, headaches, and a drawn expression of the face, were seldom observed. There was rather a feeling of well being and freedom from minor aches and pains. Dysmenorrhea of several years' standing sometimes disappeared with weight reduction.

So drastic a dietary regimen should be attempted only under the observation of a physician. The same principles, however, will apply to the more moderate reducing measures required by large numbers of the well nourished population of this country. The protein needs must be amply covered by lean meat, fish, eggs or skimmed milk cheeses. Free fat should be avoided because every gram of fat provides 9 calories instead of the potential 4 calories from each gram of proteins and carbohydrates. Fruits and vegetables supply not only carbohydrates, vitamins and inorganic salts but also the bulk which contributes to the satisfied feeling following a meal. Fresh vegetables, properly cooked in boiling salted water and served hot, need no further seasoning to make them appetizing.

In general then, a moderate reducing diet consists of protein foods from which as much fat as possible has been removed, fresh vegetables served without butter, cream, sauces or dressings, and a limited amount of fruits for dessert. With a generous intake of vegetables and fruits, further provision for vita-

WAIST-LINES AND LIFE-LINES

mins and inorganic salts is not necessary. It goes without saying that candy, ice cream sodas and other refreshments between meals must be avoided. It is also self evident that permanent results are obtained only when the new dietary habits become established, although for maintenance of weight after the desired reduction has been accomplished, the caloric intake must be increased sufficiently to balance the energy output.

SAFETY OF SCHOOL BUS DEPENDS ON DRIVER AND CHILDREN

"The safest school bus in the world is an exceedingly dangerous vehicle if it is operated by a careless driver or if it transports undisciplined children," says *Public Safety*. The bus can comply with every specification of the National Safety Council code and still its fundamental purpose of providing comfortable, hygienic and safe transportation will be defeated if the other two vital factors are defective.

The driver of a school bus should be selected for dependability, good habits, knowledge of the rules of the road and tested ability to drive a bus properly. A minimum age of 21 years should be generally required. He should not drive the bus for more than ten hours in a twenty-four hour period and should not work more than twelve hours.

The use of patrol boys is recommended to help the driver in maintaining order, insuring observance of rules by pupils, helping in an orderly loading of the bus, aiding at railroad crossings and helping children to cross the road. These boys should be selected because of physical size and strength, character and personality; they should have the respect of their school mates and should in addition live near the end of the line.

The final important factor in safe school bus transportation is the conduct of the children themselves. They must be taught to heed the patrols, to obey the driver and to observe classroom conduct in the bus. This must be taught them by their teachers. They should be on time in the morning; they should not talk with the driver; they should never extend their arms or head out of the windows; they should never try to get on or off the bus while it is in motion. They should never hitch rides on the bus or hang on it if they are riding bicycles or roller skating. They should report at once to the driver any damage done to the bus.

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WHAT happened to your skin last winter? Was it frequently chapped, dried, red or rough? Then, why go through that discomfort again?

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Just rub a few drops of the new, rich Nivea Skin Oil or, if you prefer, a tiny bit of Nivea Creme, into the exposed skin of your face, hands and neck, every night. Apply either one of these good products just before going out. Blustery weather, then, will not damage your skin—instead it will remain soft and youthful through the winter months.

Nivea Skin Oil and Nivea Creme are recommended by many doctors and nurses for use on the sensitive skin of children. Why not follow their advice?

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SEX EDUCATION

(Continued from page 1108)

the absurdity of such a method has become apparent, and now it is customary to go nearly as badly to the opposite extreme.

The girl is told to pay no attention to it except to protect her clothing from soilage, and she is urged to go ahead and do anything that she might otherwise do.

A much more sensible approach is that which takes into consideration the altered condition of the parts but does not emphasize the condition as being morbid. Menstruation is a normal process, but in many respects it approaches the pathologic. Bleeding, for example, is otherwise always associated with a pathologic condition of some grade, as also is pain. The uterus of the menstruating woman is congested, and there are decided changes in the distribution of the blood; the nervous system is often considerably more labile at such a time, and there are other evidences of altered physiology. Moderate exercise is rarely harmful; exposure to fresh air at such a time will be of no consequence unless there is chilling; bathing in warm water will rarely have a bad effect. It must be borne in mind that chilling of the skin usually tends to increase internal congestion of some sort, and so judgment must be exercised. Certainly the girl should be taught that the menstrual function is essentially physiologic and that it should be treated as being so except when there is reason to believe that it is definitely pathologic. The girl should know that the period is closely related to the time when the egg cell is extruded from the ovary and that it is somewhere near this period that conception usually takes place. The reason for this strange process seems to be that the uterus prepares itself for the possibility of conception and that by this means it insures to the organs such a superabundance of blood that some of it is lost. It may be considered to be further evidence of the extreme solicitude with which Nature regards the product of conception.

In the preceding chapter mention was made of the fact that children frequently experience rather intense love affairs. The adolescent is, of course, considerably more inclined to such attacks of "puppy love." On the other hand, some young people become so self conscious in matters pertaining to sex that they go to the opposite extreme. Either reaction is easily understood and may be regarded as normal. Boys who are so delighted with their developing manhood are likely to become rather

(Continued on page 1144)

SEX EDUCATION

(Continued from page 1143)

contemptuous of girls, who have not their virile qualities; hence they sometimes think that girls are quite impossible. It is not unlikely, however, that at times they may admire mightily from a distance. Girls who are becoming more careful of many little fine points of life are sometimes inclined to regard boys as being hopelessly uncouth. These reactions are also quite natural and do not presage a continuance of such feelings. As a matter of fact, rather the opposite is true as a rule, as overreactions are common. Concerning all these manifestations I can only say that they are normal and strictly the affair of the individual concerned; for the rest of us, "hands off!" The child should be allowed to develop his own individuality provided he is not taking a route that leads to definite deviations from what is considered to be a normal reaction.

Adolescence is a period of much dreaming and idealization. Children of this age are frequently dubbed lazy because of their propensity for dreaming and also because Nature is protecting their rapidly growing and developing bodies from injury that might be inflicted by too energetic parents wishing to capitalize on the apparent, but more apparent than real, strength. The spirit of the youngster must not be injured by telling him that he is shiftless and will come to nothing. High ideals and religious motives are characteristic also of this period and may be utilized in helping to hold the adolescent child to trends of action that may be considered safe.

In spite of every precaution, however, one may expect a considerable number of adolescent boys and girls to do foolish things. No one knows what to do with a giggling girl or a "smart Aleck" young chap. Fortunately most of them will come out of it if they are handled with patience and tolerance. It would be too much to expect that all of them should do so.

[NOTE.—In the January issue, Dr. Rice's subject will be "The Mating Period."]

The ideal of intercollegiate athletics, according to a writer quoted in *The Texas Outlook*, is "to afford the opportunity to bona fide students of amateur standing of a college to engage in health building and character building competitive sports contests with similar students in other colleges under such regulations and restrictions as will insure the maximum benefit to the participants, the spectators and the institutions represented."

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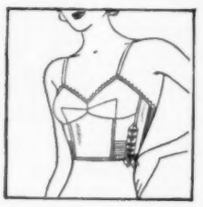

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A CENTURY OF PROGRESS IN MEDICINE

(Continued from page 1112)

and medical mail-order concerns, fraudulent medical institutes, harmful cosmetics and allied preparations, and other phases of exploitation of the public.

In 1906 the Chemical Laboratory was also established; this has grown to be a valuable adjunct to the Council on Pharmacy and Chemistry and to the Bureau of Investigation.

The American Medical Directory was also established in 1906. In this directory are listed all physicians known to the American Medical Association, together with information as to the year of their birth, their medical education, their present location, their membership in the American Medical Association, their professional associations and their connection, if any, with medical education. Hospitals and other institutions are also listed in the American Medical Directory. Behind this directory is the great reservoir of information about physicians, interns, medical students and institutions.

The American Medical Association has, from time to time, added to its official journal other publications. In 1909 it established the *Archives of Internal Medicine*, a monthly journal for physicians specializing in that field. *The American Journal of Diseases of Children* was established in 1911; the *Archives of Neurology and Psychiatry* was begun in 1919; in 1920 two new publications, the *Archives of Surgery* and the *Archives of Dermatology and Syphilology*, were established; in 1925 the *Archives of Otolaryngology* made its first appearance; the next year the publication of the *Archives of Pathology* was begun, and in 1929 the *Archives of Ophthalmology* was established, thus rounding out an unparalleled array of journals for the continuous education of the graduate physician, in order constantly to improve his ability to serve the public.

Having departed from a strict chronological order to group the special journals, let us return to 1910, when there was established a Council on Health and Public Instruction, which has since been changed in form from a council to a bureau, which seeks to promote the health education of the public through HYGEIA, pamphlets, material for health talks, radio talks, cooperative activity with other organizations, especially in the field of education, and special health activities. It is interesting to note that the American Medical Associ-

A CENTURY OF PROGRESS IN MEDICINE

ation was among the first to recognize the need of transmitting health information to the public.

In 1910 the American Medical Association Library was established.

In 1915 the American Medical Association organized its Council on Scientific Assembly which organizes each year the scientific features of the annual meeting of the American Medical Association; this council presents a rich scientific program to maintain and develop the standards of medical practice in the United States on the highest possible level.

Also in 1915 the American Medical Association took over the Quarterly Cumulative Index Medicus, which had formerly been published as the Quarterly Cumulative Index.

In 1922 the Association established the Bureau of Legal Medicine and Legislation, which keeps in touch with legislative activities of interest to the physician and assists medical societies and individual members in an advisory capacity in solving their medicolegal problems.

In 1923 the American Medical Association established, and for two years supported at a heavy loss, the publication HYGEIA, The Health Magazine, which has grown to be a powerful factor in popular health instruction and stands out in 1933 as the only scientific health magazine with a nationwide circulation.

In 1924 the library of the American Medical Association developed a unique Package Library Service by means of which physicians in remote communities may have the advantage of clipping packages, which bring to their office the latest developments along special lines in which they may be interested. In addition to this, the library also offers members of the Association the Periodical Lending Service, through which they can borrow whole issues of medical journals.

In 1929 a Central Scientific Exhibit was begun, being housed on the sixth floor of the American Medical Association headquarters in Chicago.

The Committee on Foods was organized in 1929. This committee seeks through cooperation with manufacturers and through the issuance of a Seal of Acceptance, under proper circumstances, to encourage the honest and truthful advertising of food products in their relationship to health.

The Council on Physical Therapy was established in 1925. This council investigates the merit of apparatus and methods employed in physical therapy and permits the

(Continued on page 1146)

★ HUGH WALPOLE

is Guest Editor of the December Golden Book Magazine

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HUGH WALPOLE, the distinguished British novelist, as GOLDEN BOOK's Guest Editor, picks his five favorite short stories from the World's Literature. All five appear complete in the December issue in addition to his favorite poems and other regular features.

Mr. Walpole's latest novel, "Vanessa," is one of the season's best sellers. This December issue is another literary treat sponsored by him. You will not want to miss it. GOLDEN BOOK may be purchased at all the better newsstands but you can make sure of your copy by mailing the coupon at the bottom of this page.

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233 Fourth Avenue, New York, N. Y.

I am enclosing $1 for the next six issues of the GOLDEN BOOK, beginning with Mr. Walpole's December number. (*The regular price of* GOLDEN BOOK *is $3 a year.*)

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Add to the meaning of your Christmas giving by earning the money for it. Generous cash commissions are given to HYGEIA representatives. Health has a welcome in every home. Every doctor, nurse, mother, teacher, principal, dentist, will be interested in a health magazine. Secure subscriptions now, at the height of the magazine season, when this is a popular gift, the most convenient for long distance mailing.

Send for Details

HYGEIA

535 North Dearborn Street, CHICAGO

A CENTURY OF PROGRESS IN MEDICINE

(Continued from page 1145)

use in advertising of a statement to the effect that the product is accepted by the Council on Physical Therapy. It does not, however, issue a seal of acceptance.

In 1930 the Association established a Bureau of Exhibits, which manages the Scientific Exhibit at the annual meeting of the American Medical Association, maintains the permanent Central Scientific Exhibit at headquarters and conducts exhibits of the Association's work.

In 1931 was established the Bureau of Medical Economics, which studies general economics having a bearing on the practice of medicine, suggests methods for correcting dangerous medical economic tendencies, and urges the adoption of modern medical business methods by the individual physician.

In addition to the bureaus and councils at Association headquarters, the division of the Scientific Assembly into sections should be noted. These sections are scientific in nature and consist of the following classifications: practice of medicine; obstetrics, gynecology and abdominal surgery; laryngology, otology and rhinology; pharmacology and therapeutics; nervous and mental diseases; orthopedic surgery; radiology; surgery, general and abdominal; ophthalmology; pediatrics; pathology and physiology; dermatology and syphilology; urology; gastro-enterology and proctology; preventive and industrial medicine and public health.

Winds

Today I climbed a round bare hill
And stood alone while strong west winds
Swept over me; raised high my face
To their sharp touch, as one who finds
A balm for sorrow. Flung my arms
Wide to their eager, swift embrace;
My heart leaped with a rapturous thrill
As their wild melody of psalms
Quivered and surged. While laughing wind
Like crystal waters rushing past,
That cleansed and purified my mind
Of paltry things I had held fast
For over-long, cooled scorching fires
Of restlessness and vain desires;
Peace rode the winds on that high crest
And touched my soul with strength and rest.

—Virginia Eaton in *The Kablegram.*

Fresh VEGETABLES FOR Baby IN WINTER-TIME TOO

TOMATOES

GREEN BEANS

BEETS

VEGETABLE SOUP

CARROTS

PRUNES

PEAS

SPINACH

CEREAL

CHOICEST, garden-fresh vegetables all the year 'round. Picked just at the moment of their perfection. Put in cans while they're still at their finest. Ready for Baby at any meal, any day, any month and any season.

That's what Gerber's means.

But that's not the only reason why so many physicians and pediatricians recommend and prescribe Gerber's for babies.

You can serve Baby no finer vegetables or fruits or cereal than Gerber's at any time. They're the best the garden can produce—then processed, super-strained five times as fine as you can strain at home with an ordinary sieve, steam-pressure-cooked and sealed.

They're better for Baby to eat; easier for Baby to digest. And here's another important advantage of Gerber's—

These strained vegetables and cereal, on account of the way they're cooked, retain in high degree the valuable vitamins so subject to loss in steam and water when you cook at home.

Give Baby vegetables and cereal especially produced for him. Give Baby Gerber's. Baby will like them. He'll thrive on them and they cost no more—much less considering time and trouble you save—than ordinary foods. And—

"If your doctor tells you they're better for Baby—isn't that all you need to know?"

Send for Free Booklets

Ask Your Doctor!

15c at Grocers and Druggists

Gerber's

9 Strained Foods for Baby

H-12

Gerber Products Company
Fremont, Mich.
(In Canada: Fine Foods of Canada, Ltd., Windsor, Ont.)

Please send me free copies of "Mealtime Psychology," by Dr. Lillian B. Storms and "Progress in Infant Feeding." (Enclose 10c if you would also like picture of the Gerber Baby by Dorothy Hope Smith, ready for framing.)

Name.....

Address.....

City..... *State*.....

WEIGH ON TESTED SCALES AT SAME HOUR DAILY

What do you weigh today? To weigh oneself is a lure which it seems few persons can resist. It is the duty of the U. S. Bureau of Standards to see that scales are accurate and to supervise commercial scales and weights and weighing and measuring in general. The construction of scales should be such that a clear and definite indication of the zero balance condition is given at all times so that the prospective customer may assure himself before he invests his penny that the scale is accurate.

Many persons do not avail themselves of the opportunity to avoid scales which are out-of-balance at zero. Ralph W. Smith, writing in *The Scientific Monthly,* tells how he once saw a woman step blithely onto a scale, deposit her penny, read the indicated weight and go her way entirely satisfied, when all the time there was staring her in the face a "condemned" label, 4 or 5 inches in diameter, placed squarely in the center of the scale dial to show that the scale had been found inaccurate on test.

Keep a weather eye open for a tag indicating that the inspector has "rejected" the scale on which you contemplate weighing yourself.

The human body is far from being constant in weight and may vary several pounds throughout a single day, depending on the time of day, the temperature, the amount of food and drink taken into the system, and similar factors. For a real check on whether or not you are losing or gaining weight, weigh regularly on the same good scale and do your weighing at approximately the same time and under the same bodily conditions every day.

TREAT SERIOUSLY ALL LIGHT CASES OF ILLNESS

"It is a great mistake to treat even light cases of measles, chickenpox, mumps, scarlet fever, tonsillitis, whooping cough, or any of the other so-called 'children's' diseases as though they did not amount to much. Treatment of that sort is comparable to the careless handling of a loaded gun which surprises you by going off and doing a lot of damage," comments Dr. Robert H. Riley in a report from the department of health of the state of Maryland. It is wise to regard a digestive upset or a slight cold in a child with suspicion until one is sure that it is not the beginning of something more serious.

Earn Money

to make this a *REAL* Christmas

If you are available for part time or full time work, this offer is for *you*. HYGEIA can use the services of energetic, wide-awake men and women. The work is not merely soliciting magazine subscriptions, but presenting two remarkably attractive propositions on a liberal cash commission. A representative in a Chicago suburb worked only a couple of hours a day for one month and earned over $30.00. Does that appeal to you?

Begin Now!

Why not get full details at once? Now is the time to get busy if you want to earn money to make this Christmas the festive time it should be in your home. The coupon below will bring you complete information. Mail it *today!*

This Coupon Brings Full Details

HYGEIA Circulation Department,
535 N. Dearborn St., Chicago, Ill.

I am interested in your offer to HYGEIA representatives. Please send me full details about your proposition.

Name.....

Address.....

.....

Present Occupation.....

Are you interested in full or part time work?

.....

When could you begin work?.....

.....

MODERN MEDICINE CAN MAKE DIPHTHERIA A RARITY

This year marks the twentieth anniversary of the production of the first toxin-antitoxin for the prevention of diphtheria in this country as well as the twentieth anniversary of the discovery of the Schick test, by which immunization to the disease is determined. Drs. William H. Park and Béla Schick are the two pioneers responsible for these aids in stamping out the disease which has so diabolically destroyed childhood.

Before modern medicine was benefited by this definite diagnosis and specific remedy, diphtheria was rampant in all sections of the country every winter, closing schools and places of public gatherings, and causing panic in every mother's heart and frightful mortality among children.

The disease is always endemic in large centers of population and is liable to become epidemic at any season but especially in the winter when common colds are persistent and mucous membranes become irritated and rendered more liable to infection.

All school children should be given the Schick test, an article in *The Texas Outlook* says. Those showing susceptibility should be immunized by the family physician with the proper administration of toxin-antitoxin, which gives a high percentage of permanent immunity. Children suffering from the disease should be taken immediately to the physician for proper and adequate dosage of antitoxin for the cure of the disease. Early treatment of diphtheria is essential. Treatment should be given as soon as the formation of the membrane begins.

There is small danger in the administration of present-day antitoxin from antiphylaxis, which was a former bugbear. Sudden death has occurred in many convalescent diphtheria cases in which the patients were allowed too much freedom immediately after disappearance of the symptoms. At least ten days or two weeks should be allowed before any unnecessary exertion of the heart is permitted.

Diphtheria deaths should never occur. The disease should be a curiosity because of its rarity instead of a common complaint of childhood throughout the land.

A recent survey indicates that two thirds of our schools fail to furnish the three handwashing essentials—soap, warm water and drying equipment. How about your school?

positive sterilization *possible with* PYREX *nursing bottles*

NURSING bottles are more thoroughly sterilized if the possibility of breakage is removed, 400 doctors have found.

This is only one of the reasons why they suggest Pyrex Nursing Bottles. These bottles are practically immune to breakage from heat or cold! They can stand the high temperature sterilization demands and are equally resistant to refrigerator cold. This resistance also permits uninterrupted feeding schedules.

And because Pyrex Nursing Bottles are 6-sided on the outside, mothers find them easy to hold. Rounded on the inside, they are easily cleaned.

Two sizes . . . 8-oz. narrow neck or wide mouth, 25¢; 4-oz., narrow neck for boiled water or orange juice, 15¢.

"Pyrex" is the registered trade-mark of Corning Glass Works, Corning, N. Y., and indicates their brand of resistant glass. These prices apply in the United States only.

Why Many Physicians Prescribe Lucky Gluten Flour

1—Because it gives the loaf a better flavor—hence, patients find it less objectionable.
2—Because it is guaranteed to meet U. S. Government standards for a gluten flour.
3—Because it stands approved by the American Medical Association—Committee on Foods.

Send $1.00 for 5 lb. trial package.

FEDERAL MILL, INC. ■ LOCKPORT, N. Y.
Mfrs. of High Quality Flours for more than 25 years.

The A.P.-UPLIFT

U. S. Pat. 1,702,922
—Invented by Mme. Poix to create the stylish upward contour; to relieve pain and remove cause of many bust troubles; also for pre-natal and nursing periods.

Sizes 30 to 44
Pink Repp.....$1.00
Pink Tussah Silk... 1.50
Pink Mesh or Jersey 2.00

If not at dealers, order direct giving exact bust measure next to skin. Booklet free on request.

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INVALUABLE AID *In Relieving Pain*

"OVR-NITE" HEATING PAD
(Reg. U. S. Patent Office)

Stays Hot 12 Hours—Prepared with 1 oz. of hot water

Invaluable wherever heat applications will relieve pain or congestion, as in neuritis, rheumatism, lumbago, menstruation; also for keeping hot compresses hot. Ready for use in 2 min. Stays uniformly hot for eleven hours. A real comfort for duck hunters and all outdoor sportsmen. Can be carried in pocket. Soft, pliable, no possibility of leakage. Life of pad guaranteed to be 120 hours. Sent prepaid with washable rubberized cloth cover, 65c. Additional pads without rubber cover, 55c each, prepaid.

GEORGE J. YORE & CO., SOLE MFRS.
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The SEX TECHNIQUE IN MARRIAGE • By I. E. Hutton, M.D.

"Dr. Ira Wile describes the book as a clear, succinct, non-emotional, authoritative and conservative exposition of the practical factors involved in making marriage successful on the sexual level. That describes the book exactly . . . It is primarily concerned with the conduct of the honeymoon and with the technic of the sexual performance." —Hygeia.

Acclaimed by the Medical Press Everywhere

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EMERSON BOOKS, 333 Sixth Ave., N.Y.C.

CONCISE—AUTHORITATIVE—MATTER-OF-FACT
—COVERS EVERYTHING

"A Child is to be Born"

Reprinted for expectant mothers from the series in "Hygeia"

Symptoms—Exercise Diet—Clothing 15c American Medical Assn. 535 N. Dearborn St., Chicago

Schools and Camps

Schools for Backward Children

Beverly Farm (INC.) *A Home and School for Nervous and Backward Children and Adults*

220 acre farm. 7 bldgs. New school gymnasium. 35th year. Industrial and school training given. Dept. for birth injury cases. GROVES BLAKE SMITH, M.D., Supt. Godfrey, Ill.

<> TROWBRIDGE TRAINING SCHOOL <>

Home school for nervous, backward children. *Best in the West.* Beautiful buildings. Spacious grounds. Experienced teachers. Individual supervision. Resident physician. Enrolment limited. Endorsed by physicians, educators. Booklet. E. Haydn Trowbridge, M.D., 1810 Bryant Bldg., Kansas City, Mo.

TUBERCULOSIS PREVENTION IS CHEAPER THAN CURE

An advertisement which claimed that prevention is cheaper than cure caught the eye of a business man.

He thought, "Then why does the average American spend annually $30 for doctors, dentists, quacks, hospitals and medicines and only 99 cents for health?" Like all business men today he was interested in economy and began to consider seriously these statistics, which were the result of five years' effort. A doctor joined him.

"No doubt about it," the physician agreed. "Prevention is cheaper than cure. The commissioners want to close a wing of the tuberculosis sanatorium, but that is not the way to economize.

"Tuberculosis always collects from the community in one way or another. For instance, a wage earner loses his job because of tuberculosis. Soon his family is on the relief list.

"And fifty tuberculous persons outside the sanatorium mean fifty possible spreaders of the disease. It is obviously cheaper to care for one person now than for three or four later.

"In 1904 there were few sanatoriums. Now there are 600 in the United States and only one-third as many persons die of the disease; that is, there are about 160,000 fewer deaths now than there would have been thirty years ago."

The business man was impressed. "I was a little lukewarm about being Christmas seal chairman in my town, but if these seals help to show that prevention is cheaper and better than cure, I'll work my head off."

In his enthusiasm he went to the library, where he began a research into the history of the disease and its cure. He found references to it in Greek and Roman history, in the tales of Dr. Samuel Johnson, in stories of weird medical practices from the fifteenth to the eighteenth century. Then came Louis Pasteur with his demonstration of the germ theory of disease in 1860. In 1882, Robert Koch announced that he had found the germ that causes tuberculosis, the tubercle bacillus. Then followed the great quest for a cure and Dr. Edward Livingston Trudeau's discovery in 1885 of the value of fresh air as a cure. After Dr. Trudeau had demonstrated the soundness of his claim, hundreds of sanatoriums throughout the country followed his lead, using his methods, the only form of treatment that even today yields results.

Today the National Tuberculosis Association carries on its antituberculosis campaign through the aid of penny "stamps."

"If Christmas seals furnish the steam to keep the movement going," the chairman decided, "I'll furnish the steam to help sell them."

Don't *Force* the "Never Hungry" Child To Eat Breakfast!

But, Instead, Try Serving Wheaties—The Marvelously Alluring and Delicious New Ready-to-Eat Whole Wheat Flakes That Children Adore

Accepted By The Committee On Foods of The American Medical Association As A Pure Food, Honestly Advertised

IF your child is "finicky" about breakfast, won't eat cereal—then you are urged to try this new and altogether marvelous breakfast food creation—Wheaties!

For here is a form of Whole Wheat that's enticing. That children don't look upon as another "something" good for them, but revel in like a party dish. And—never tire of!

It's something different from any whole wheat you have ever seen. Tastes like whole wheat has never tasted before . . . *a new and unique form of the most basic of all cereals for human consumption.*

It comes from the leading wheat millers of the world—the millers of famous Gold Medal "Kitchen-tested" Flour. And it magically transforms whole wheat from a "necessary" food to a food that's marvelously light and tempting.

All the Mineral, Vitamin Containing Portions Are Retained

In the manufacture of Wheaties, none of the bran (with its valuable phosphorus and iron), nor of the germ (that part of the wheat berry where nature has stored up Vitamins A, B, E and G) has been removed. There must be a sound reason why wheat has always been the basic cereal food of most Europeans and Americans. With nearly twice the protein content and a greater percentage of minerals, it has a distinct advantage over such grains as corn and rice.

Accepted by the Committee on Foods of the American Medical Association

Here is another point about Wheaties. They have been accepted by the Committee on Foods of the American Medical Association. That fact, in itself, is the best possible assurance in the world that you can have concerning the merits of Wheaties as a food. And—in respect to their quality and the advertising claims made for them.

If you believe in Whole Wheat for children—get a package of Wheaties today. Then serve these delicious, gold brown crisped flakes of Whole Wheat with milk or cream and sugar to your child. What they do in the way of getting him to eat a good breakfast will both surprise and delight you. *1252*

GOLD MEDAL FOODS, INCORPORATED
of Copr. 1933, by General Mills, Inc.
GENERAL MILLS, INC., MINNEAPOLIS, MINN.

SEASON FOR USING SALT PORK BRINGS RECIPES

The millions of pounds of pork lately sold by farmers in compliance with the agriculture adjustment program are being cured by dry salting, and approximately 20 million pounds are now ready for free distribution to needy families through the Federal Emergency Relief Administration.

To demonstrate economical uses of this meat supply and at the same time produce appetizing dishes for the dinner table, the food specialists of the bureau of home economics have evolved recipes that are good not only for the meat that will be distributed at the relief stations but also, of course, for the salt pork that the housewife will buy.

Salt pork has perhaps more uses than any other kind of meat. It may be fried and served with milk gravy. When combined with hominy and tomatoes or cabbage, it is a full meal. For baked beans, chowders and vegetables it is an excellent seasoning. Crisp bits of it mixed with bread crumbs make an unusual stuffing for peppers or tomatoes, and there is nothing better for "toning up" starchy foods such as potatoes, rice and macaroni.

Lean pieces may be simmered a little below the boiling point and sliced like ham. Or large, lean pieces can be baked after soaking and parboiling. This requires slow baking. For economy, cook a large piece and use leftovers as ham would be used.

The bureau cautions that the salt on the meat is a preservative and should not be washed off until the meat is to be used. Soaking, sometimes over night, is required for very salty meat.

HOW TO HELP YOUR CHILD SUCCEED IN SCHOOL

A form of code is presented by the United Parents Associations of Greater New York Schools, Inc., to show parents how to help their children succeed in their school work. It includes, among others, the following hygienic points:

Arrange the breakfast and lunch hours so that there is no rushing at home or to school.

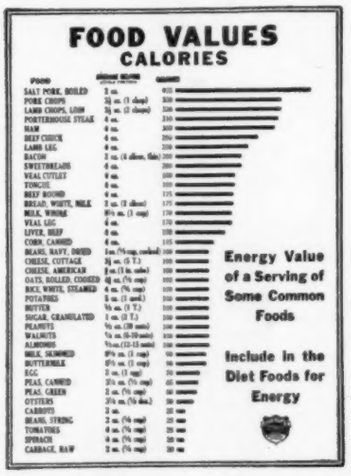
See that your child is dressed simply, neatly, modestly and suitably in accordance with the weather.

Insist on children under 14 having at least ten hours' sleep.

Provide a quiet place for home study, with good light and ventilation. Prevent interruptions as far as possible.

Picture the school as a happy, desirable place rather than as one which children should dread.

MOTHERS Have You Sent for These Charts?



Your children need a greater supply of calories during cold weather. They must have them to provide the energy for their active winter play, as well as for additional warmth.

The above calorie chart will be of great value to you in planning winter meals. Use it to guide you in furnishing an adequate supply of warmth and energy.

This chart is one of a set of six Food Value charts published by the National Live Stock and Meat Board, and accepted by the Committee on Foods of the American Medical Association.

All of these charts will be helpful in planning properly balanced meals. The protein chart gives the quality and quantity of the muscle building material in many of our common foods; the mineral charts list the important sources of the mineral elements necessary for the building of the skeleton and the blood; and the vitamin chart shows the foods which are important sources of the vitamins so necessary for growth and health protection.

This Coupon Will Bring Them to You Without Cost

HY-12

NATIONAL LIVE STOCK AND MEAT BOARD
407 S. Dearborn Street, Chicago, Ill.
Please send me without charge one set of the Food Value Charts.

Name .....

Address .....

EXPERIMENTS SHOW SAFE RESCUES FROM ICE ACCIDENTS

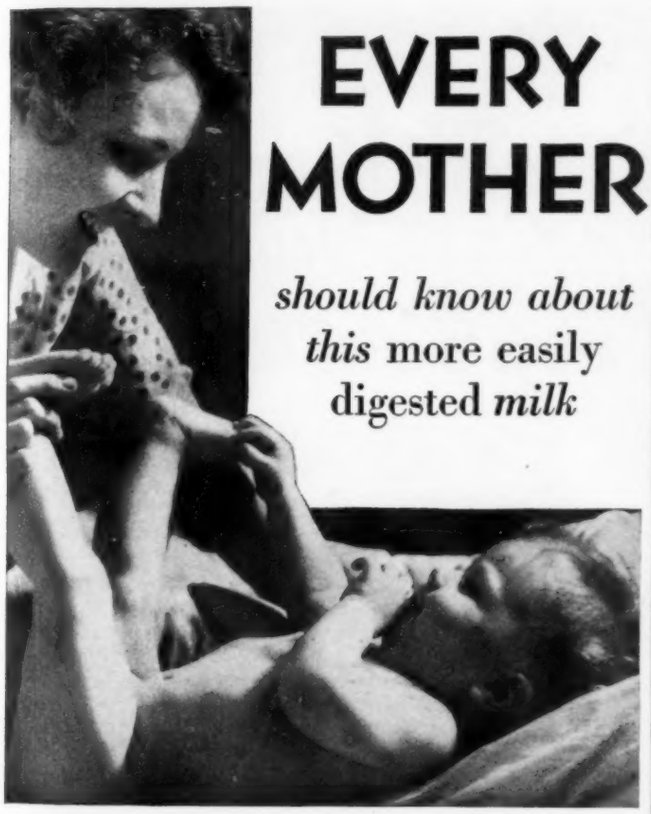
Because of the lack of authentic information on ice conditions as related to safety, representatives of the American Red Cross, Girl Scouts, Boy Scouts and the Skate Sailing Association of America conducted a series of experiments, it is reported in *Safety Education*.

Among the rescues tried was the human chain rescue, which is recommended when a group is present but no equipment is available. In its execution the first rescuer slides out on his stomach to grasp the wrists of the victim; the second slides out in the same manner to grasp the skate of the first; the third kneels, grasping one skate of the second, while the fourth stands and acts as an anchor, bracing skates and working backward. Members of the chain must use their free hands to assist in working their way backward and to keep their weight spread out.

A plank or ladder pushed within reach of the victim will usually enable him to climb out. This will distribute his weight to thicker ice away from the hole.

For the rope rescue, the rescuer must be equipped with skates or "creepers" (an appliance with spurs, attached to shoes to prevent slipping) to enable him to pull out the victim; otherwise he will only pull himself toward the hole. If the end of the rope is knotted or a stick of wood is tied in the end, it will be easier to cast the rope accurately to the victim and also easier for him to hold on to it. Or if he is too weak to hold the line, a noose, 30 inches in diameter, will enable him to slip his head and one arm through. A completely helpless victim can best be rescued if a rescuer goes out for him with a rope, which should be fastened under the rescuer's armpits and held by assistants.

Self rescue is entirely possible in a majority of cases, but it is usually defeated by unreasoning panic. It is a good plan to count ten before deciding what to do. The legs should be prevented from going forward under the ice by executing a crawl kick. This position will enable the victim to assume a planing position and crawl forward flat on the stomach until the hips are at edge of ice, then quickly swerve sideways and with both arms extended above the head, roll quickly away from edge. The initial pull-out can be materially facilitated by use of a large spike, sharp knife or similar device. The victim should not attempt to stand or kneel until well away from the hole.



EVERY MOTHER

should know about this more easily digested *milk*

IF YOUR baby suffers from intestinal disturbances, or if his formula is unsatisfactory in any way, he may be greatly benefited by the use of Libby's Evaporated Milk.

Pediatricians and general practitioners in increasing numbers are prescribing this milk for infant feeding formulas.

Libby's Evaporated Milk contains all the food elements which bottled milk is depended upon to supply, and in practically the same quantities. And it has the important advantage of being far easier to digest.

Tests show that the curds which this milk forms in the baby's stomach are smaller, softer, and more easily digested, than those that are formed by raw or pasteurized milk.

By homogenization, the fat globules are divided and evenly dispersed so that they are as digestible as those in mother's milk.

The use of Libby's Evaporated Milk may make a real difference in your baby's comfort and development. Why not talk it over with your doctor?

Libby, McNeill & Libby, Chicago

ACCEPTED AMERICAN MEDICAL ASSN. Coöperation in Foods

Libby's Evaporated Milk bears the Seal of Acceptance of the American Medical Association's Committee on Foods

NRA

baby ...or coffee ?

■ Are you taking all possible care of yourself before baby arrives? Doing everything to guard your nerves, heart, stomach, kidneys?

What about your coffee?

The caffeine in ordinary coffee can affect all or any of them adversely. That is why doctors frequently order it out of the diet of expectant mothers.

Change your coffee brand today to Kellogg's Kaffee-Hag Coffee... the modern, delicious coffee without caffeine. Top-grade Brazilian and Colombian coffees, held to highest standards of blend and roast...yet 97% caffeine-free.

Your doctor will OK Kaffee-Hag...your system will OK it... and your palate will OK it.

Ground or in the Bean... Roasted by Kellogg in Battle Creek. Vacuum packed. Buy it from your grocer. Satisfaction guaranteed, or money back.

Sign, Tear Off and Mail This Coupon Now!

Send 15 cents in stamps for a can of Kellogg's Kaffee-Hag Coffee and a booklet on coffee and health. Use this coupon.

KELLOGG COMPANY, Battle Creek, Mich.

Please send me a can of Kellogg's Kaffee-Hag Coffee (97% caffeine-free) and booklet. I enclose 15c in stamps.
(20) HYB12

Mrs. .....

Street. .....

City .....State.....

This *radiant vitality* impossible if your diet is unbalanced

Canned Pineapple supplies many food factors essential to a balanced diet

●Often it is a matter of *diet*—this vitality, this radiance everyone wants. The lack of sufficient vitamins, not enough of the alkaline minerals—little unseen deficiencies—can keep you from feeling your best.

So it is important to you to know the recent discoveries about the unusual worth of Canned Pineapple.

You already know it has one of nature's rarest flavors. It is one of the world's best-loved fruits. Now dietetic studies show it helps to provide the system with many vital food factors.

Research goes further. It promises you the full benefits of Canned Pineapple if you'll just enjoy it once each day. A Pineapple Cup of crushed or tidbits, or two slices, served before, during or after some one meal daily.

Canned Pineapple costs very little. One large can gives you four servings. You can get it always—in any season. It is served on dining cars, in hotels and in restaurants everywhere.

Let Canned Pineapple begin to help you this very day!

Educational Committee

Pineapple Producers Cooperative Association, Ltd.
100 Bush St., San Francisco, Calif.

Many nutritional benefits from 2 slices or a Pineapple Cup daily

Your daily portion of the fruit supplies good amounts of three important vitamins . . . A, to promote growth and help build body resistance . . . B, the antineuritic factor and a nutritional essential for normal appetite . . . C, the antiscorbutic vitamin.

Canned Pineapple has blood-building power. It supplies substantial quantities of iron and copper. And along with its many other benefits, the fruit helps to safeguard against excess acid in the blood by raising the alkaline reserve for at least two hours.

Noteworthy, too, is the fact that Canned Pineapple—always naturally sun-ripened before packing—furnishes these and many other important dietetic benefits at uniform level the year 'round.

The proper daily serving is a Pineapple Cup of crushed or tidbits—or two slices. Healthful, too, in salads or desserts.

Copr. 1933 by Pineapple Producers Cooperative

CANNED PINEAPPLE

Index for this volume is found in vol 10

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"Listen, son:

I AM saying this to you as you lie asleep, one little paw crumpled under your cheek and the blond curls stickily wet on your damp forehead. I have stolen into your room alone. Just a few minutes ago, as I sat reading my paper in the library, a hot, stifling wave of remorse swept over me. I could not resist it. Guiltily I came to your bedside.

"These are the things I was thinking, son: I had been cross to you. I scolded you as you were dressing for school because you gave your face merely a dab with a towel. I took you to task for not cleaning your shoes. I called out angrily when I found you had thrown some of your things on the floor.

"At breakfast I found fault, too. You spilled things. You gulped down your food. You put your elbows on the table. You spread butter too thick on your bread. And as you started off to play and I made for my train, you turned and waved a little hand and called, 'Good-bye, Daddy!,' and I frowned, and said in reply, 'Hold your shoulders back.'

"Then it began all over again in the late afternoon. As I came up the hill road I spied you down on your knees playing marbles. There were holes in your stockings. I humiliated you before your boy friends by making you march ahead of me back to the house. Stockings were expensive—and if you had to buy them you would be more careful! Imagine that, son, from a father! It was such stupid, silly logic.

The Good-Night Kiss

"Do you remember, later, when I was reading in the library, how you came in, softly, timidly, with a sort of hurt, hunted look in your eyes? When I glanced up over my paper, impatient at the interruption, you hesitated at the door. 'What is it you want?' I snapped.

"You said nothing, but ran across, in one tempestuous plunge; and threw your arms around my neck and kissed me, again and again, and your small arms tightened with an affection that God had set blooming in your heart and which even neglect could not wither. And then you were gone, pattering up the stairs.

"Well son, it was shortly afterwards that my paper slipped from my hands and a terrible sickening fear came over me. Suddenly I saw myself as I really was, in all my horrible selfishness, and I felt sick at heart.

"What has habit been doing to me? The habit of complaining, of finding fault, of reprimanding—all of these were my rewards to you for being a boy. It was not that I did not love you; it was that I expected so much of youth. I was measuring you by the yardstick of my own years.

"And there was so much that was good, and fine, and true in your character. You did not deserve my treatment of you, son. The little heart of you was as big as the dawn itself over the wide hills. All this was shown by your spontaneous impulse to rush in and kiss me good-night. Nothing else matters tonight, son. I have come to your bedside in the darkness, and I have knelt there, choking with emotion, and so ashamed! It is a feeble atonement. I know you would not understand these things if I told them to you during your waking hours, yet I must say what I am saying. I must burn sacrificial fires, alone, here in your bedroom, and make free confession. And I have prayed God to strengthen me in my new resolve. Tomorrow I will be a real daddy! I will chum with you, and suffer when you suffer and laugh when you laugh. I will bite my tongue when impatient words come. I will keep saying as if it were a ritual: 'He is nothing but a boy—a little boy!'

"I am afraid I have visualized you as a man. Yet as I see you now, son, crumpled and weary in your cot, I see that you are still a baby. Yesterday you were in your mother's arms, your head on her shoulder. I have asked too much, too much.

"Dear boy! Dear little son! A penitent kneels at your infant shrine, here in the moonlight. I kiss the little fingers, and the damp forehead, and the yellow curl.

"Tears came, and heartache and remorse, and also a greater, deeper love, when you ran through the library door and wanted to kiss me!"

The Shrine of Sleeping Childhood

I do not know of a better shrine before which a father or mother may kneel or stand than that of a sleeping child. I do not know of a holier place, a temple where one is more likely to come into closer touch with all that is infinitely good, where one may come nearer to seeing and feeling God. From that shrine come matins of love and laughter, of trust and cheer to bless the new day; and before that shrine should fall our soft vespers, our grateful benedictions for the night. At the cot of a sleeping babe all man-made ranks and inequalities are ironed out, and all mankind kneels reverently before the living image of the Creator. To understand a child, to go back and grow up sympathetically with it, to hold its love and confidences, to be accepted by it, without fear or restraint, as a companion and playmate, is just about the greatest good fortune that can come to any man or woman in this world—and, perhaps, in any other world, for all we know.

And I am passing this "confession" along to the fathers who may be privileged to read it, and for the benefit of the "little fellers"—the growing, earth-blessing little "Jimmies" and "Billys," and "Marys" and "Janes" of this very good world of ours.

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Among Hygeia Advertisers

At the risk of appearing to be a trifle shy on good manners, I want, first of all, in this perusal of HYGEIA advertisements, to make special mention of the two page colored advertisement by HYGEIA itself. I believe, however, that this remission in good manners will be quite readily pardoned by any one who is beginning to get really worried about what to give for Christmas this year. If you can use the gift list appended to the announcement, it can lift a load off your mind in less than five minutes' time. After all, it's quite alluring to think of sending a gift, a portion of which is delivered to your friend every month throughout the year. That is what happens when you order a HYGEIA gift subscription. You will note that when more than three subscriptions are ordered, the rates become so compellingly low that you just can't afford to overlook any one this year — uncles, aunts, cousins, and any of your friends for whom you want to do something especially nice. Incidentally, this announcement about HYGEIA shows a long column of some of the good things in store for HYGEIA readers for next year. You probably have on your Christmas list people who would appreciate a gift of this kind more than anything you could give them.

Have you ever found yourself in a situation where you would almost give your right arm for a hot water bottle or a heating pad? You may have wanted it to help relieve the pain of a terrible toothache in the middle of the night, or to warm your frozen hands and feet and chilled body when duck hunting, skating or watching a football game. A most surprising substitute for the hot water bottle is the Ov'rnite Heating Pad—a soft, pliable, pillow-like bag which actually heats itself merely by the addition of one ounce of water. Unlike the hot water bottle, this apparently magical pad will stay hot for twelve hours, and will deliver a total of 120 hours of heat. The price of the Ov'rnite Heating Pad has been reduced this year, so that you can easily afford one or more for use as a hot application to relieve pain, or to take along with you as a body-warmer during exposure to severe cold.

And what do you do about the chapped hands and dry, cracked skin that are so likely to come when the first snowflakes begin to whip through the air? I believe it is pretty well agreed that these troubles are due almost entirely to the lack of the customary supply of natural skin oils. You probably use more soap on the skin during the winter months, and then, too, on account of the cold, the circulation in the skin is perhaps slowed down somewhat. Your skin is dry and brittle because the oils are not there. The natural solution, of course, is to supply additional oil. I suppose almost any kind of oil would have the desired softening effect, but the after-greasiness left by most oily products is always objectionable. The absence of practically all such unpleasant after-effect is one of the great advantages of using Nivea Creme. If you prefer the product in liquid form, Nivea Skin Oil is available. You can try either one of these products without cost.

An important and informative announcement regarding bran products is made on page 1063, by the Kellogg Company. Of course, bran has for years been regarded as having certain beneficial dietary qualities, but the last few decades have seen a great increase in the popularity of bran food products, especially with those who need extra bulk in the diet. Now, by reason of a new government ruling, you can see on the label of a bran product just what its percentage content of bran is. In this connection, the Kellogg announcement reminds you that the three Kellogg bran products meet the needs of all classes of persons who use bran. The company supplies Kellogg's All-Bran, Kellegg's Bran Flakes, containing more than 50% bran, and Kellogg's Pep, containing less than 50% bran.

Science sometimes serves humanity by developing products such as were never seen or heard of before. But quite often, science casts its appraising eye on some product long employed for common, everyday usage, and develops for that product a new and hitherto unappreciated use. Something like that has happened with evaporated milk, in recent years. Fifteen or twenty years ago, there was little said about using evaporated milk for infant feeding. Then came scientific knowledge which showed that evaporated milk supplies practically all of the food elements expected from bottled milk, and that it is actually easier to digest than raw or pasteurized milk. Libby, McNeil and Libby, in their announcement, give additional facts on this subject, and it is also interesting to remember that the safety of this product is a decided advantage in infant feeding.

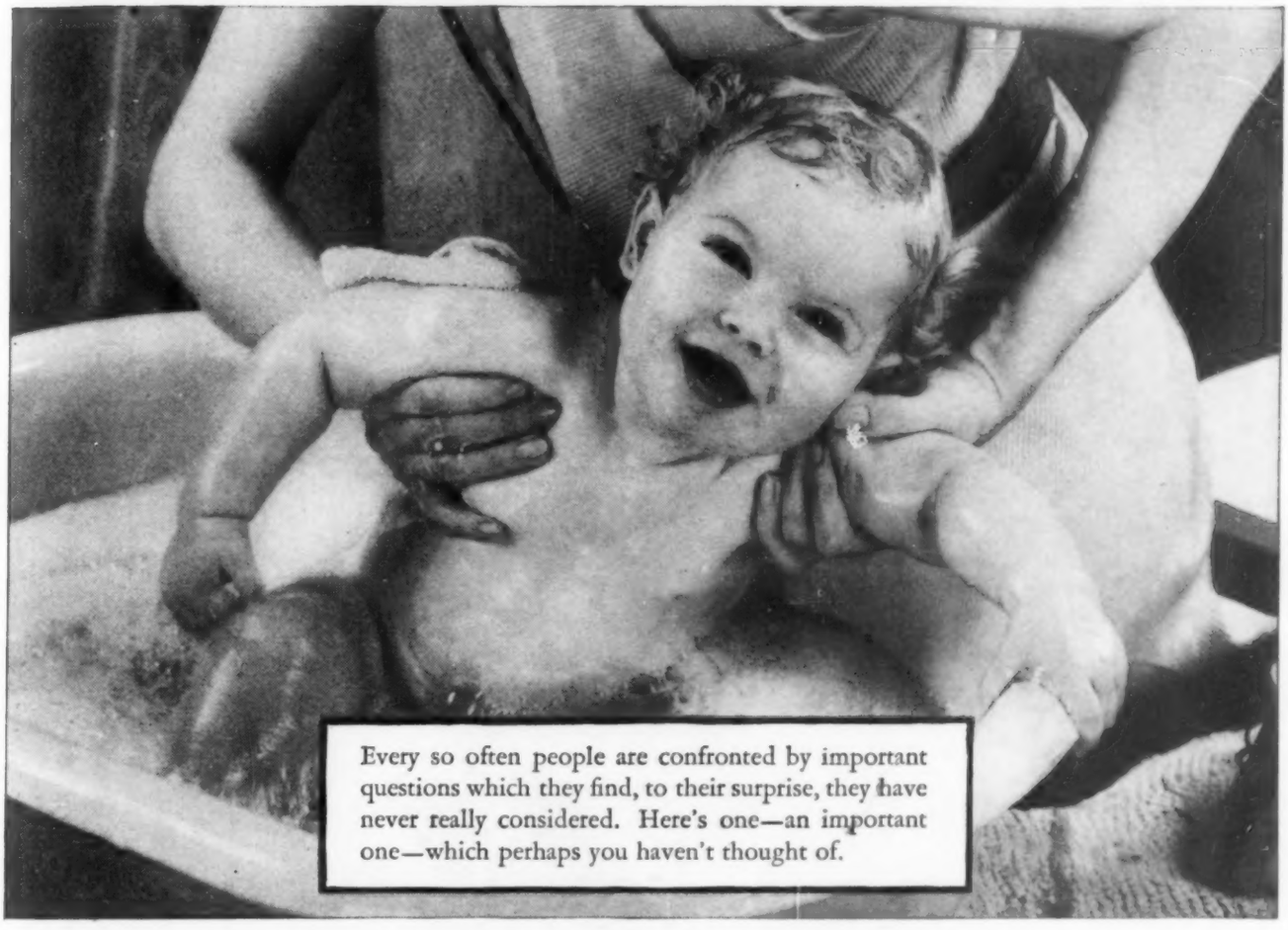
While on the subject of feeding the baby, do not overlook the special announcement made by the Hygeia Nursing Bottle Company, page 1140. Almost everybody is perhaps more or less familiar with the Hygeia Nipple and the Hygeia Nursing Bottle. While a nipple may seem like a simple thing, the Hygeia company has given the most painstaking care to development of their product. They have even added a tab at the edge to grasp when pulling over top of bottle. You can sterilize the Hygeia Nipple and preserve its sterility up to the time it is given to the baby. Fingers need never come in contact with the actual nipple portion. The same degree of cleanliness can be maintained in the bottles themselves by reason of the wide mouth, the smooth walls and rounded inside construction.

If you are raising a baby according to your physician's orders, you probably have been told that after a certain age, you should begin to include some pulped or comminuted vegetable in the diet. But fresh vegetables purchased every day or so for the baby are quite expensive. Also the preparing of these vegetables in a form fine enough to be safe for the baby requires a great deal of the mother's valuable time. However, Gerber's strained foods for baby can make it very simple for you to provide the required vegetable addition to the infant's daily food. The manufacturer has some interesting material on the subject of infant feeding which you can obtain by simply returning the coupon.

Charles S. Mohler
ADVERTISING EDITOR

HE'S ASKING YOU, DOCTOR

are you sure you can answer his question?



Every so often people are confronted by important questions which they find, to their surprise, they have never really considered. Here's one—an important one—which perhaps you haven't thought of.

How pure is the soap you advise for babies?

Are you really sure? A great many doctors are not sure.

More serious even—a great many of the "imported" soaps which some doctors advise for baby use, have been found to contain excessive amounts of free alkali and free fatty acid.

Such soaps are of course unsuitable for an infant's tender skin.

If, on the other hand, you are one of the increasing number of doctors who recommend Ivory—here are some purity facts which will encourage you.

Ivory contains no coloring or perfume.

Ivory contains no free alkali.

Ivory contains no free fatty acid.

Ivory is as pure as it is possible to make a soap.

Ivory is always pure—because its large-scale production can be exactly controlled.

Ivory is safe for any healthy skin.

And, of course, a fact which may be important for your patients—Ivory is considerably less expensive than other baby soaps and is available at practically every drug and grocery store.

IVORY SOAP

99 44/100% Pure · It floats

THE GIFT That Lasts from Christmas to Christmas

Every Month
A New Reminder of Your Thoughtfulness

Use this gift list — and do your Christmas shopping in a few minutes

HYGEIA is an especially suitable gift for those you wish to remember this year. Every month until next Christmas it will bring authentic health information and health guidance, with ever recurring appreciation of your kindness. At the special holiday rates you can send several HYGEIA subscriptions and still have money left for other necessary gifts.

HYGEIA is a fitting gift for any one on your list. Every one who prizes the benefits of good health will welcome HYGEIA. Parents

Good Things IN STORE FOR HYGEIA READERS IN 1934

LOSING WEIGHT SAFELY AND SANELY
Frances Berkeley Floore, hospital dietitian, explains how to do it.

BIRTHMARKS
What they are, what causes them, and what can be done for them. By Dr. Joseph Jordan Eller.

DENTAL DENS
Three articles exposing dental quackery, written by a dentist, Dr. Robert A. Brotman.

THAT PLAGUY APPENDIX
The history of appendicitis and its treatment, told by Dr. Harold B. Wood.

THE NEW KIND OF BABY DOCTOR
He is described by a registered nurse, Beulah France.

FALSE FACES—FALSE CONCEPTIONS—FALSE TEETH
For every one who has lost his own teeth or fears he may lose them. By Dr. M. R. O'Leary.

prizes the benefits of good health will welcome HYGEIA. Parents

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535 North Dearborn Street, Chicago

SEND HYGEIA to each of the persons listed below. I have checked the subscriptions desired, and enclose $..... in full payment.

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I ALSO enclose $..... for .... copies of The New HEALTHYLAND at $1.00 each.
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.....

who have their children's health as well as their own to consider will appreciate HYGEIA'S helpful advice. Give HYGEIA to your business associates and acquaintances whom you wish to remember. Give it to your friends and relatives to whom you wish to send something personal. You can't send them health done up in fancy Christmas packages. But HYGEIA will take with it each month your sincere wishes for their health and well-being—and information to help them acquire and keep it.

The cost of HYGEIA is in keeping with these times. If you can use five subscriptions the cost for these year round gifts will be but $1.50 each. Save both time and money by giving HYGEIA.

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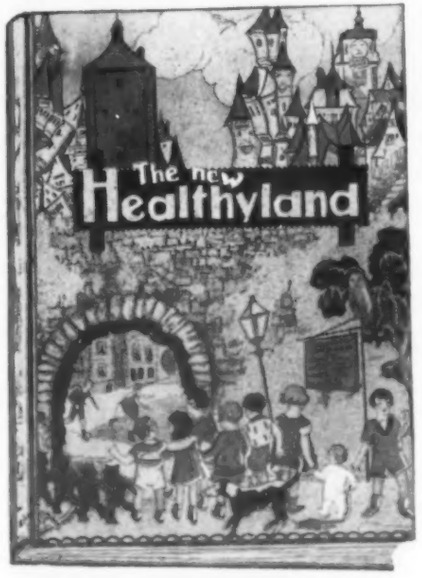
THE NEW HEALTHYLAND

It is really a guide to the enchanting Healthyland, told in story and verse to the delight of children. No drab rules of health here, but fascinating tales which point lessons of health so adroitly that children easily learn them and love them.

The 168 pages of The New Healthyland are filled with health material for children which has appeared in HYGEIA. In addition to stories and verses, it contains clever drawings, health plays that children can give, and letters from children of foreign lands telling about their different health customs. Gay colored inserts add to the colorfulness of this big picture book. The regular price of The New Healthyland is $2.00, but you can order copies now for only $1.00 each with each Christmas subscription to HYGEIA.



THE PREVENTION OF SPEECH DISORDERS
Dr. John A. Glassbury discusses all kinds of speech disorders and tells how they may be prevented.

CURIOUS FACTS ABOUT CONSTIPATION
They will interest every one who suffers from this "curse of civilization." By Dr. Lee D. Cady.

CHILDREN WHO NEVER GROW UP
The training of subnormal and mentally deficient children, ably discussed by Edgar A. Doll.

THE WASSERMANN TEST
What the layman needs to know about this widely used test for syphilis. By Dr. John A. Kolmer.

FOOD FADS, FACTS AND FADDISTS
Some interesting information regarding misinformation about foods, told by Marion R. Farren.

IDIOSYNCRASY
Elliott R. Weyer says that 90 per cent of all adults have some allergic reactions or idiosyncrasies. Do you?

MY CHILDREN QUARREL SO!
Why do they do it? And what should be done about it? Eleanor Hubbard Garst answers both questions.

LUMPS IN THE BREAST
Dr. Norman Joseph Kilbourne tells what a woman should do if she finds a lump in her breast.

Of course he likes **CHEWING GUM**

All children do. Let them chew it and enjoy it. It's good for them and probably nothing else has ever offered so much innocent pleasure for so little money as chewing gum. There is a reason, a time and a place for chewing gum.

N-43

THE NATIONAL ASSOCIATION OF CHEWING GUM MANUFACTURERS

Add Zest to Health Teaching

Sir Walter Raleigh discovered fire breathers here in America and, at once, aroused Europe's imagination and curiosity to explore and settle this continent. Hence, we have the United States. A little imagination mixed in with Health Teaching will kindle the children's interest to browse around into the facts of health, make health teaching a great deal of fun, and, incidentally, more fruitful in health-living results.

A Program for Health Education

The Joint Committee of the N. E. A. and the A. M. A. has compiled this program for the use of teachers in primary grades through high school and normal college. It lends itself well to the needs of teacher-training institutions. It is a source of constantly new ideas for health activity to the teacher of health. 1930 paper cover edition, $1.25; 1930 cloth cover edition, $1.75.

PAMPHLETS

Send to the American Medical Association for pamphlets and charts on all important phases of health activity—disease prevention (typhoid, scarlet fever, smallpox, diphtheria, etc.), infant welfare, diet, exercise, patent medicines. A catalog of published pamphlets will be sent free upon request.

PLAYS

These Plays, containing real health lessons give young pupils a chance to act out health ideas, to feel that good health is real. They make capital health activities.

The Good Health Elves.—17 to 25 characters. Set of 17 copies, $2.00. Single copies, 15 cents each.

The Trial of Jimmy Germ.—8 characters. Set of 8 copies, 35 cents. Single copies, 10 cents each.

The Friendly Brushes.—11 characters. Set of 11 copies, 50 cents. Single copies, 10 cents each.

The Magic Fluid (Diphtheria Antitoxin).—8 characters, with chorus, "King's subjects," etc. Set of 8 copies, 35 cents. Single copies, 10 cents each.

The School Lunch Room.—11 to 20 characters. Single copy, 10 cents; set of 10 copies, 45 cents.

Descriptive list of 12 plays is given in the catalog.

A Book of Health Stories

"The New Healthyland" is a compilation of stories, plays, poems and puzzles, and health letters taken from a 3-year issuance of HYGEIA, the Health Magazine. The stories and plays, with their health lessons will appeal to the imaginations of children in the grades. Bright pictures, colorful cover and clear large type makes this book instantly attractive. There are 168 pages, size 8½ x 11½, price, $2.00.

Free to Teachers

"Health Teaching Plans from Hygeia"—a 48-page booklet presenting 27 concrete health teaching plans other teachers have used and found practical. These projects which are suitable for kindergarten, grades and high school, have been reprinted from Dr. J. Mace Andress' Department, "Health and the School," appearing in HYGEIA each month.

TO ORDER Check the items desired, detach this advertisement and return with remittance

American Medical Association, 535 North Dearborn Street, Chicago, Ill.

Please send me items checked on this page. Remittance for $..... is enclosed.

Name.....

Address.....

GOVERNMENT RULING

ends confusion on bran products

TO PROTECT the buying public, the United States Food and Drug Administration has advised that every package of cereal labeled "Bran" state on the label exactly what it contains. If less than 50% of the cereal is actually bran, the definite percentage should be printed plainly on the carton. If other parts of wheat are included, a qualifying phrase explaining this should be added.

• • •

BEFORE this ruling, it was not easy for the purchaser to distinguish between a cereal that was entirely bran, or all bran with flavoring, and another that was mostly wheat. The disappointment that resulted from this confusion was due to the fact that part-bran products contain only a percentage of the "bulk" in all-bran products.

Kellogg's ALL-BRAN is labeled "ALL-BRAN Deliciously Flavored with Malt, Sugar and Salt," a statement which describes the product fairly and honestly.

Kellogg's ALL-BRAN corrects most types of common constipation due to insufficient bulk, safely and pleasantly. It furnishes a generous amount of "bulk"—needed to promote normal elimination.

Laboratory research has shown that Kellogg's ALL-BRAN is also rich in iron and a good source of vitamin B.

However, Kellogg's ALL-BRAN is not a "cure-all." There are types of internal disorders causing constipation which should be treated only on a physician's advice.

But if you can eat lettuce, spinach and other "bulky" vegetables—you can also eat Kellogg's ALL-BRAN to advantage—for its "bulk" is much the same as that in leafy vegetables.

When you buy a bran cereal for the relief of constipation, read the wording on the package. The facts are there! Make sure by asking for Kellogg's ALL-BRAN—the most popular cereal of its type in the world—because it furnishes "bulk" in concentrated form for satisfactory results. At all grocers. In the red-and-green package. Made by Kellogg in Battle Creek.

Other Kellogg Products with Bran

* Kellogg's Bran Flakes, with other parts of wheat, now contain *more* than 50% bran.

* Kellogg's PEP contains *less* than 50% bran and is now labeled "Toasted Wheat with Extra Bran Added."

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**These products, while mildly laxative in character, are popular mainly as delicious, wholesome ready-to-eat cereals—and are not recommended primarily for the relief of constipation.*

Uncrowded, sound, beautifully even TEETH

Bottled Sunshine helps to build them.....

Her *second* teeth—the permanent set—are being formed now. Will they come in beautifully straight and even with plenty of space between? Will they resist decay in later years?

That depends largely on whether she receives the proper materials with which to *build* them.

One certain factor—Vitamin D—must be abundantly supplied, not only for sound, even teeth, but also to develop a well shaped head.... a fine, full chest....a strong back....straight legs.

Babies receive a certain amount of this important bone-and-tooth building factor from direct contact with the sunlight. Not nearly enough, though.

Clouds, fog, smoke, ordinary window glass prevent the sun's rays from shining directly on babies' bare skin where they are required to be protective.

Regularly every day babies need *Bottled Sunshine*—good cod-liver oil. It is a sure source of supply, specialists say.

They further remind mothers that the kind of cod-liver oil given may make a big difference in results. Many physicians recommend *Squibb's* for this reason.

They know it is specially protected so as to be rich in Vitamin D, and in *another* vital element which may aid in building resistance—Vitamin A.

And most important for mothers to know is that an oil of high vitamin content, like Squibb's, is less expensive than an oil of lower vitamin content.

Remember—the thing you pay for in cod-liver oil is its vitamin content....A single teaspoon of Squibb's Cod-Liver Oil supplies a much larger amount of Vitamins A and D than oils of lower vitamin content which are not vitamin protected. Don't be misled into buying an oil that costs a few cents less but has a lower vitamin content. You will *not* find it sound economy. Always insist on *Squibb's*, the vitamin tested, vitamin protected oil.

Try this richer oil which hastens bone-and-tooth building....If your young baby is growing exceptionally fast, she may need this enriched cod-liver oil. It contains *ten times* more Vitamin D than standard oil. It also contains Vitamin A. Ask for Squibb's Cod-Liver Oil with Viosterol-10 D!

Keep the older children's resistance high with Mint-Flavored Oil!....It has such a pleasant taste. Older children like it. Give it to them regularly to help keep their resistance up. Start with it now.

Free Booklet!...'Why Every Baby Needs Bottled Sunshine.' Write E. R. Squibb & Sons, 745 Fifth Ave., N. Y.

SQUIBB
COD LIVER OIL
PLAIN *or* MINT-FLAVORED

Produced, tested, and guaranteed by E. R. Squibb & Sons, manufacturing chemists to the medical profession since 1858.

FIGHT INFECTION WITH THIS DEPENDABLE ANTISEPTIC

ABBOTT'S CHLORAZENE

■ For first aid application to cuts, scratches and other minor wounds, as well as for other home antiseptic uses, Abbott's Chlorazene (chloramine) offers the advantages of being many times as powerful as carbolic acid, and of being virtually non-poisonous and non-caustic —even when applied to open wounds or delicate membranes. An important matter, too, these days, is Chlorazene's low cost.

■ Chlorazene, the first Dakin antiseptic to be made in America, is supplied in 4.6-gr. tablets, one of which, when dissolved in one ounce of water, makes a 1% solution. Tablets are supplied in boxes of 12 and bottles of 100, by all druggists.

■ Your druggist also has Aromatic Chlorazene Powder, which contains 5% Chlorazene in combination with sodium bicarbonate, sodium chloride, eucalyptol and saccharin. Aromatic Chlorazene Powder, in addition to making pleasant and effective antiseptic solutions, is also of value as a deodorant. Supplied in 2-oz. and 4-oz. bottles.

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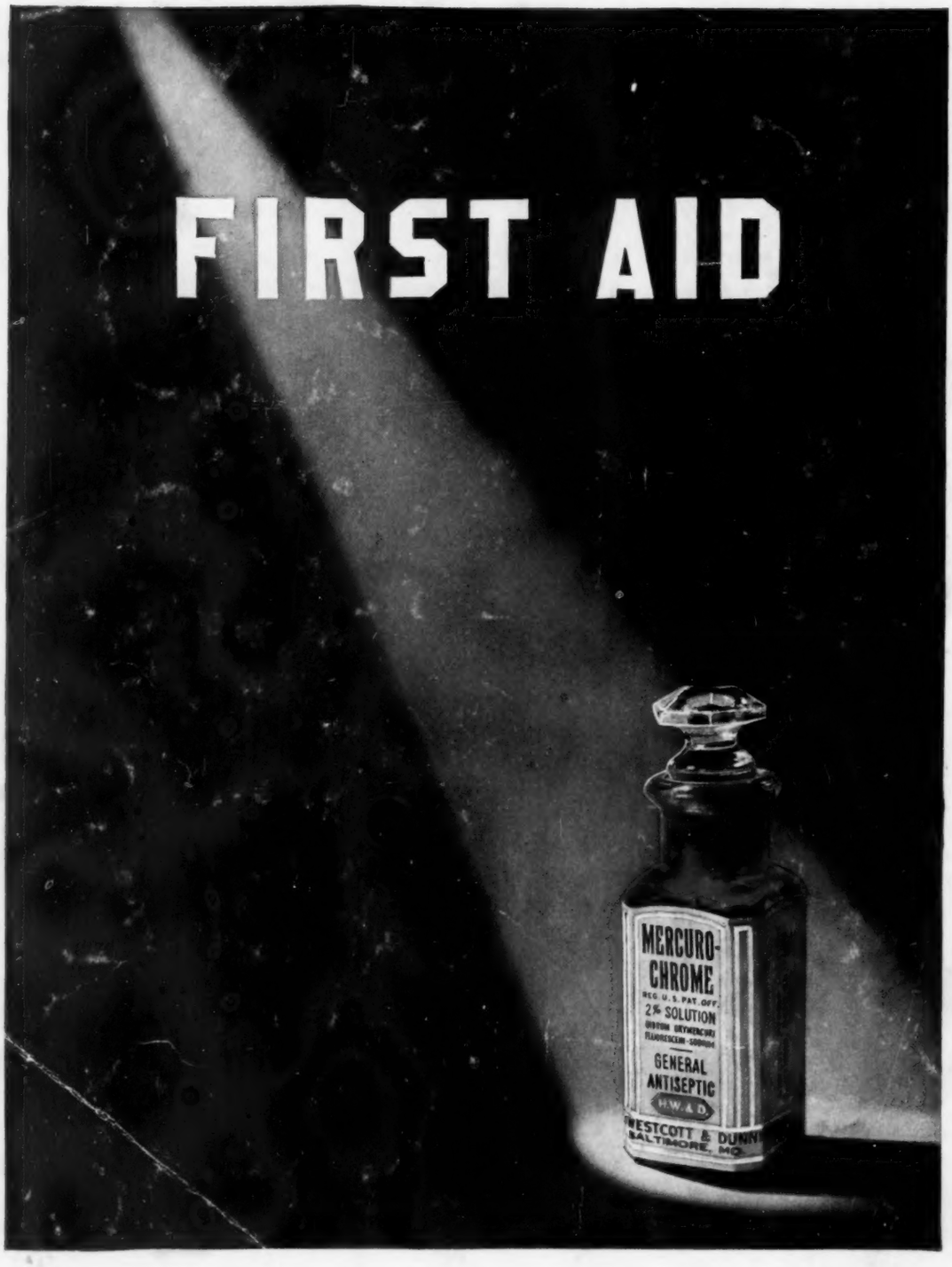
NORTH CHICAGO, ILLINOIS



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NEGLECTED scratches may cause serious infections. The prompt use of an antiseptic is an important preventive measure. MERCUROCHROME is an effective antiseptic and should be used in the first aid care of all minor wounds, scratches and abrasions. In more serious cases the layman should not assume the responsibility of a physician.

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